

October

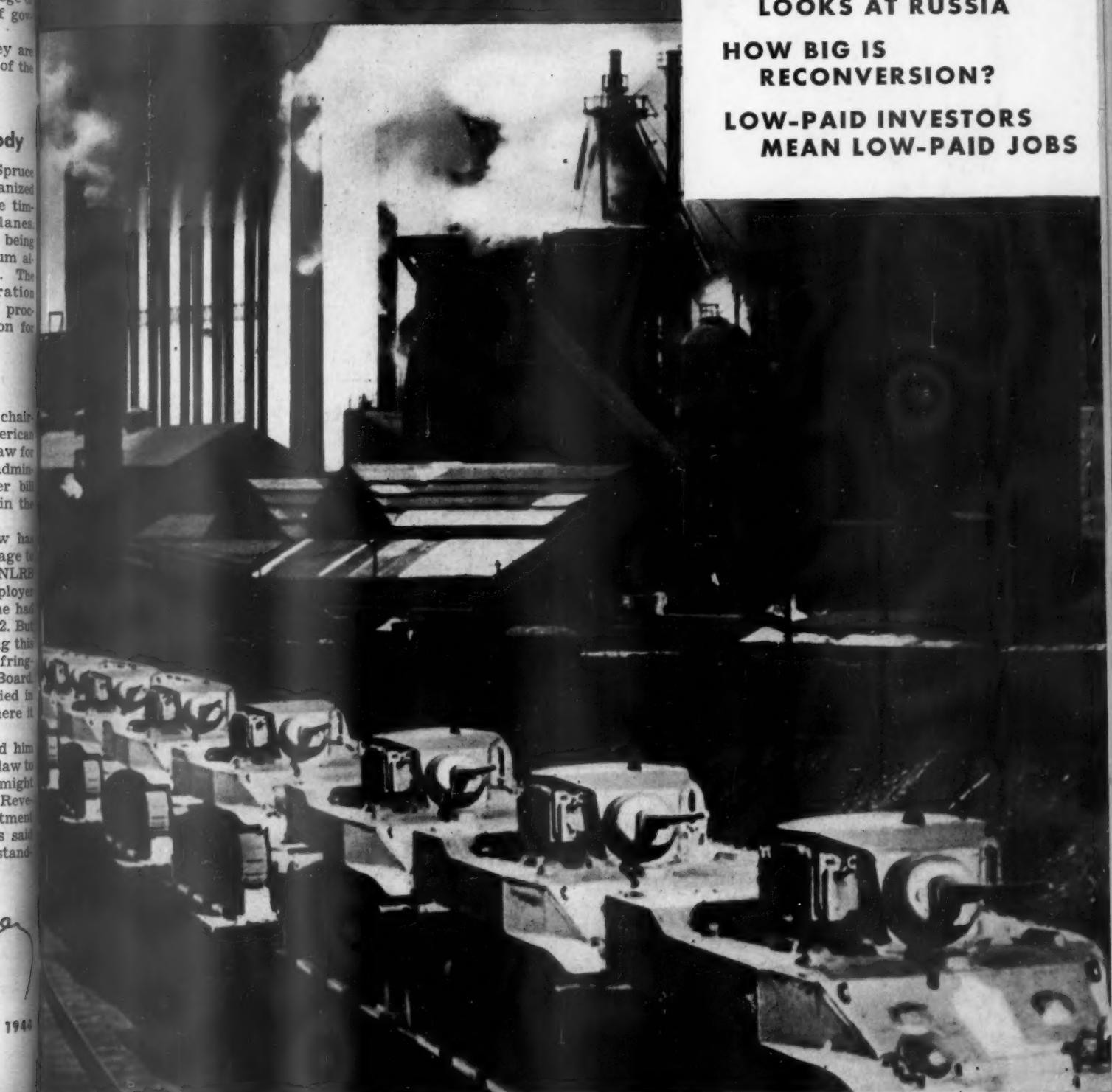
1944

NATION'S BUSINESS

**ERIC JOHNSTON
LOOKS AT RUSSIA**

**HOW BIG IS
RECONVERSION?**

**LOW-PAID INVESTORS
MEAN LOW-PAID JOBS**





In the "Service of Supply"

with the transportation of raw materials . . . with the shipment of armament, food, clothing and other vital supplies to military camps and seaports.

It's a big job; a job for the railroads, for Union Pacific. Over the strategic middle route, uniting the East with the Pacific Coast, heavy freight trains rumble to com-

● The "service of supply" isn't confined to the battle-fronts. It begins here at home . . . begins

plete their missions. And those missions will be carried out, day and night, until victory is ours.

Union Pacific train crews—and many other thousands of men and women employees—are in the "service of supply." They're keeping 'em rolling. Many other thousands are in uniform. Loyal Americans—all of them—working and fighting for the liberty they love . . . for the right to provide for future security . . . for the spirit of equal opportunity that is the foundation of your America.

★ Extra war bonds bought today will speed the day of victory.



THE PROGRESSIVE
UNION PACIFIC
RAILROAD



Nation's



Business

PUBLISHED BY

CHAMBER OF COMMERCE OF THE UNITED STATES

VOL. 32

OCTOBER, 1944

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SPECIALLY designed Roto-Clones assure needed ventilation and heat dispersion inside our tanks so that crews are more comfortable; especially during battle maneuvers when openings must be closed against enemy shell fire. The Roto-Clone brings in outside air from which it removes the dust and dirt.

AAF's contributions to war production are widely varied. Deck houses and hull sections for LST boats . . . air intake filters for airplane engines . . . special filters for submarine and cargo vessels . . . in addition to all types of air cleaning equipment for war industries.

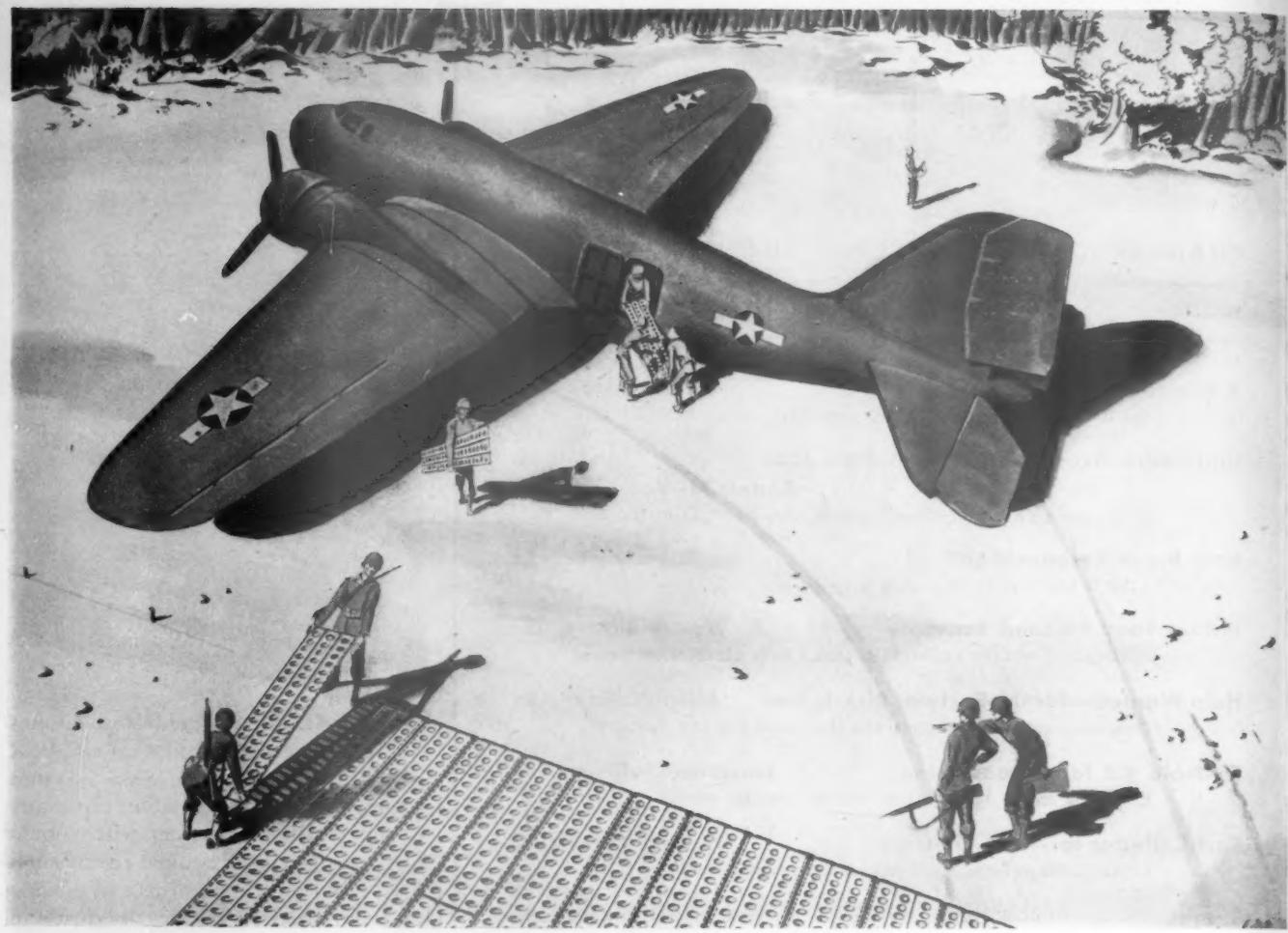
If you have a dust problem, write for "AAF In Industry", a booklet which describes our complete line of dust control and air filtration equipment.



AMERICAN AIR FILTER CO., INC.

109 Central Ave., LOUISVILLE 8, KY.
 In Canada: Darling Bros., Ltd., Montreal, P. Q.





Landing fields that fly ... made of Alcoa Aluminum

Lightweight airplane landing mats, which could be flown, were urgently needed by our Air Forces in order to put advance bases into speedy action against the enemy.

As the principal supplier of aluminum sheet, Alcoa was requested by the U. S. Engineers Corps to work with the contractors in developing this mat without sacrificing any of the strength characteristics of the steel mat.

Sample mats were made of several strong aluminum alloys and tested by running heavily loaded trucks over them. Then, the best alloy and gauge was given further tests through actual landings and take-offs.

Mats made of Alcoa Aluminum, although 40 percent thicker than the steel mats, gave the same stiffness, or

rigidity, at a saving of half the weight. Individual planks of aluminum mats weigh approximately 35 pounds compared to 70 pounds for steel planks.

These aluminum mats now are being used where transportation is difficult or speed imperative. Their light weight makes it possible to fly them to advance bases and assemble them quickly to provide landing fields.

The 45,000,000 pounds of aluminum being used for these landing mats is equivalent to one-seventh the United States production of aluminum in 1939—a small fraction of today's vast production for war. With Alcoa's expanded facilities this new metal will find increasing spheres of civilian usefulness when materials and manpower are available. ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh 19, Penna.

ALCOA ALUMINUM



CASH REB
FARE REC
TOOL CO
MANU

QUOTES

BECAUSE disappointing valued customers has been so unpleasant for us, we'd like to have you read these quotes from actual letters in our files which refer to OHMER's part in the war effort. We're sure you'll agree this work had to come first!

"We would like to express our thanks for the excellent manner in which you handled the entire development and production . . . The consistently reduced price to us . . . has helped us reduce our cost to the Government."

"The spirit of cooperation exhibited by your entire organization is sincerely appreciated and has been of material assistance in meeting the unprecedented demands on us for military equipment.

"We feel that the Ohmer Register Company has made a substantial contribution to the cause of the war . . ."

"The type and complexity of precision work you are performing can only be accomplished by means of a high caliber personnel and fine equipment such as yours. You have aided considerably in the development of this product . . ."

" . . . the Ohmer Register Co. undertook to manufacture one of our most critical sub-assemblies. We have produced completed sights in increasing numbers and according to schedule for ten consecutive months. Without Ohmer's help, this could not have been possible."

"You have always met our schedule requirements on time and your workmanship has been of the highest . . . Companies like yours will play a big part in bringing this war to a speedy conclusion."

THE DAY when we can put these facilities to work for you again can't come too soon. Post-war OHMER CASH REGISTERS will reflect experience gained in peace and war since 1898.

OHMER

CASH REGISTERS for every type of retail store
FARE REGISTERS and TAXIMETERS for transportation
TOOL CONTROL REGISTER SYSTEMS for industry
MANUFACTURERS OF REGISTERING EQUIPMENT SINCE 1898

Through the Editors' Specs

Historical review

ALTHOUGH NATION'S BUSINESS wishes to place no wagers as to when the war will end and our favorite armchair general is singularly noncommittal, history demonstrates that October is an excellent month for invading Berlin.

October 9, 184 years ago, some Cossacks, portions of the Russian Empire Army, and a few Austrians from Saxony captured Berlin, overran the town and conducted themselves in a very rollicking manner.

In October, 1806, after Napoleon had routed the Prussian Army which had gained an invincible reputation under the great Frederick, his Old Guards tramped into Berlin. While there Napoleon promulgated the Continental Blockade idea to cut off trade between the Continent and England. That turned out to be a mistake.

Since we are on the subject, there would be poetic justice in an Allied parade down Unter den Linden this month. On October 15, 100 years ago Friedrich Nietzsche was born. It was he who first expounded the superman philosophy—while being waited on hand and foot by an indulgent sister.

Authorities of his time finally decided he was insane—which made him highly indignant—but Corporal Schicklgruber believed him.

Three pounds of government

READING John H. Crider's book, "The Bureaucrat" recently, we were reminded of a research worker we know who has a novel idea for reducing government expenditures after the war.

According to Mr. Crider, high cost of government has been the downfall of every nation since the dawn of history.

"The bureaucrat," says Mr. Crider, "is incorrigibly fertile and he spawns in boards, commissions, authorities and departments with a speed that sometimes puts the fruit fly to shame."

Following through on that simile, our researching friend has a lit gun that would stop that sort of thing. All he needs is a constitutional amendment to the effect that the Government can use only three pounds of paper *per capita* per year.

He thinks three pounds ought to be enough paper to govern anyone. The average civil servant can handle ten pounds of paper a week. With less than that, things get dull around the shop, department heads worry because it looks as though everyone is loafing so they drop a few.

Well, our man multiplies 135,000,000 Americans by three pounds of government and gets 202,500 tons.

Ten pounds per government employee X 50 weeks X 4 workers = one ton of government.

So, eight-hundred and nine thousand government workers would be the maximum after the war instead of our present 3,113,000 or so. They couldn't add more workers because there wouldn't be any paper to work with.

He says that would leave the government with plenty of freedom of operation. They could use the paper for as many or as few activities as they wished. But whenever they get ambitious, there'd be that Constitutional Amendment. A simple law wouldn't work. Too easy to change it—and that takes paper, too.

Prophet with honor

ONE OF OUR representatives recently fell into conversation—friendly—with the chief of police of a town in New York state who told him confidentially that he, the chief, had something of a reputation as a local soothsayer.

Basing his predictions on the NATION'S BUSINESS "Management's Washington Letter" the chief has done some long-range forecasting that had his fellow townsmen regarding him as crazy—until they came true. He refuses to tell his fellow townsmen where he gets his information.



5 tons a month for every pilot!

WITHOUT counting the tremendous tonnage of ammunition, bombs, gasoline, and food consumed by our airmen, there are 5 tons of supplies shipped abroad every month for each pilot overseas!

What does this 5 tons include? Aircraft replacement parts, pilot's clothing, flying instruments, parachutes, maintenance supplies, radio and signal apparatus . . . items from a total of 500,000 spare parts and equipment which may be destroyed or damaged.

So figure it out. It adds up to a tremendous tonnage! And the needs of the Air Forces are only a small part of the wartime transportation job of your railroads.

Thanks to the splendid cooperation of the public, shippers, and government agencies, these vital war supplies will continue to flow in increasing quantities until Victory is won.

Erie Railroad

ONE OF AMERICA'S RAILROADS—ALL OUT FOR VICTORY

Buy War Bonds and Stamps

23,578	FREIGHT TRAINS DAILY
1,408,964	FREIGHT CARS DAILY
25,000,000	NET TONS DAILY
AMERICAN RAILROADS AT WAR	



Collector's item

SOMETHING new in bill-collecting has been successfully tried out by a prominent physician on the Main Line, that Gold Coast area just outside Philadelphia. The doctor, in looking over his accounts one day—and who doesn't—discovered that he had a number of small bills, ranging from \$3.00 to \$25.00, that were fast becoming bad debts. Statements were sent month after month to no avail.

But the Doctor got a bright idea. He told his secretary to put aside all the "Bill Rendered" statements that were four months or more overdue and type the following note on the bottom:

"Would you be able to buy each month, \$2.00 worth of War Savings Stamps and send them to me until your bill is paid in full? You will be doing something patriotic and I'll be getting my books cleared."

It was amazing how the stamps came in. The doctor uses them all to buy bonds for his new granddaughter.

Victory shift

TORN between a desire to continue working or go back to high school, many a Milwaukee youth has been able to settle the problem by doing both.

The vast plants of the Allis-Chalmers Manufacturing Company made it possible by creating a 4:20 to 8:20 P.M. four-hour shift for hundreds of teen-agers who wanted both to work and attend school.

Only those students who maintain satisfactory scholastic averages will be permitted to work. If their grades drop, they will get a polite note from the management advising them to devote full time to their studies.

Before the youth are hired, permission of both school authorities and parents must be given.

Swindle sheet sleuth

A BUSINESS executive was being commended for his success as an amateur detective and for locating the culprit of a local crime.

"You have an uncanny ability," he was told, "to separate the true from the false."

"That comes from checking expense accounts," he replied.

Hospitalidad riena

THE STAFF MEMBER who took Spanish in college has been falling behind in his work as he amused himself with a new three-color folder published by the Ft. Worth, Texas, Chamber of Commerce. The pamphlet, printed entirely in Spanish, is intended as a bilingual Good Neighbor gesture toward Mexico. It emphasizes the possibilities of closer business ties between the city and its Spanish speaking neighbors, lists the convenient transportation facilities and tells something of the city's history, in-

dustry, and civic life. Prepared with the help of the Mexican Affairs Committee, the publication demonstrates, at least, that Ft. Worth is an up and coming city in any language.

Footnote on education

WE WERE not so much surprised as the University of Chicago appeared to be recently when a group of top flight business executives without college degrees took a series of four two-hour tests in the humanities and the social, physical and biological sciences—passing with flying colors.

A large number of the executives were middle-aged and many years removed from formal schooling of any kind.

If that incident is used as an argument against the benefits of a college education, somebody will be making a mistake. The fact is that the men who took the test would probably be among the first to recognize the importance of formal study. At least, other business men are.

The University of Chicago itself would not be in such handy position for conducting these experiments if John D. Rockefeller, a business man who never went to college, had not taken an active financial interest in the University's success.

And Harvard's Graduate School of Business Administration was not exactly hindered by a gift of \$6,000,000 from the late George F. Baker, president of New York's First National Bank, who left school at 16.

An obvious point seems to have escaped the professors. Men of trade are not likely to give money to the advancement of the humanities, and the social, physical and biological sciences unless they know what they are buying.

Two Christmas Eves

NOTE TO THOSE who rush out on Christmas Eve to do their Christmas shopping: Christmas Eve also comes on October 14 this year!

If you expect Santa Claus to visit your favorite foxhole, the package must be in the mail by Oct. 15. Even Christmas cards must be in the mail by Nov. 15.

Further information: Canned liquids are O.K. but Christmas greetings should not be sent in glass.

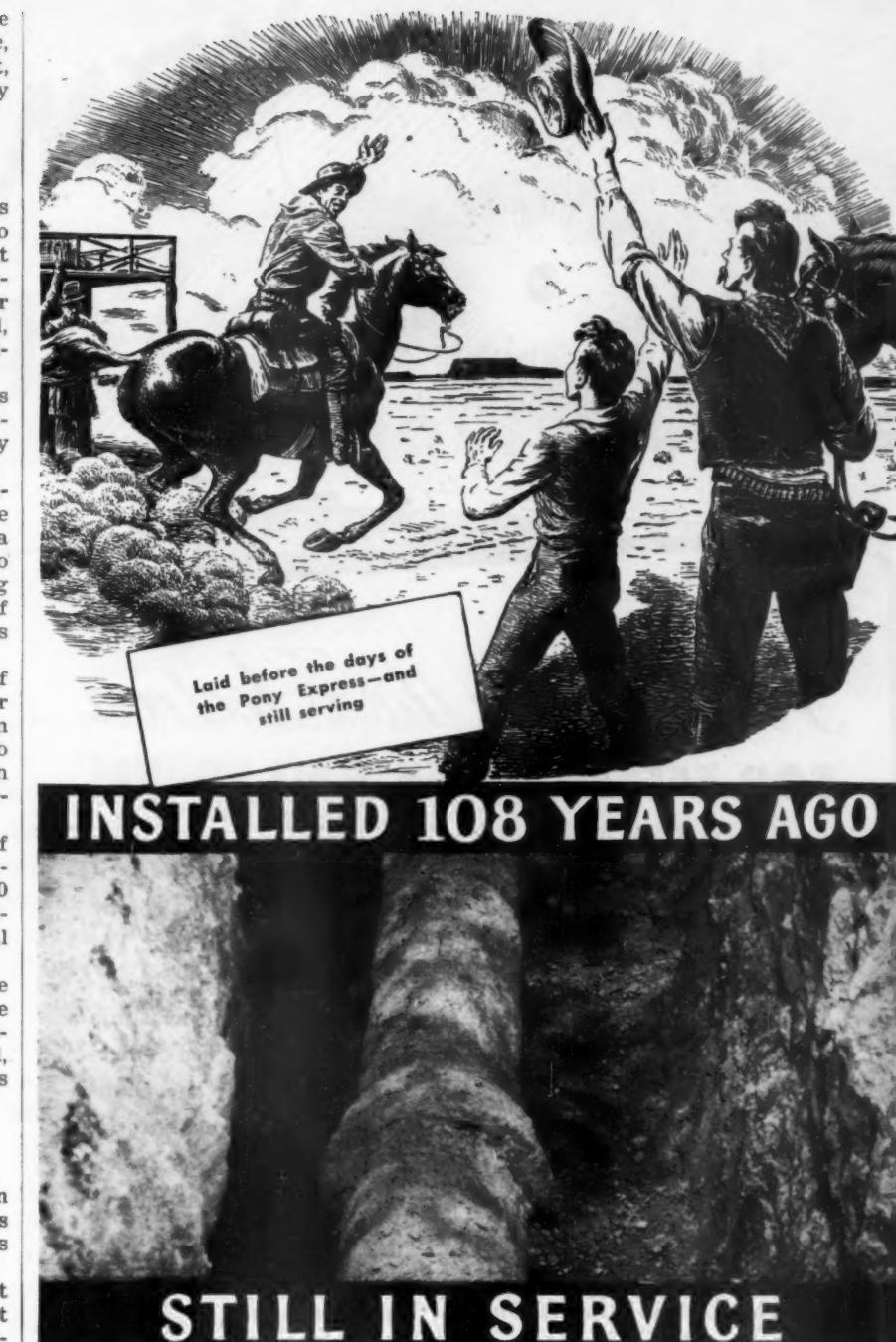
Paper saving formula

A MAN with a mission wrote us the other day to enlist our help in a campaign against the-established-way-of-doing-things. What makes him mad goes like this:

Mr. Seek writes a letter to Mr. Brown asking for certain information.

Mr. Brown replies that he hasn't the information but suggests that Mr. Seek write a letter to Mr. Wise who is an authority.

Mr. Seek writes a letter thanking Mr. Brown for his cooperation.



Twenty-two years after this cast iron water main was installed in Lancaster, Pa., the first overland mail was carried by pony express from California to St. Louis in 23 days and 4 hours. The above unretouched photograph shows a section of Lancaster's old cast

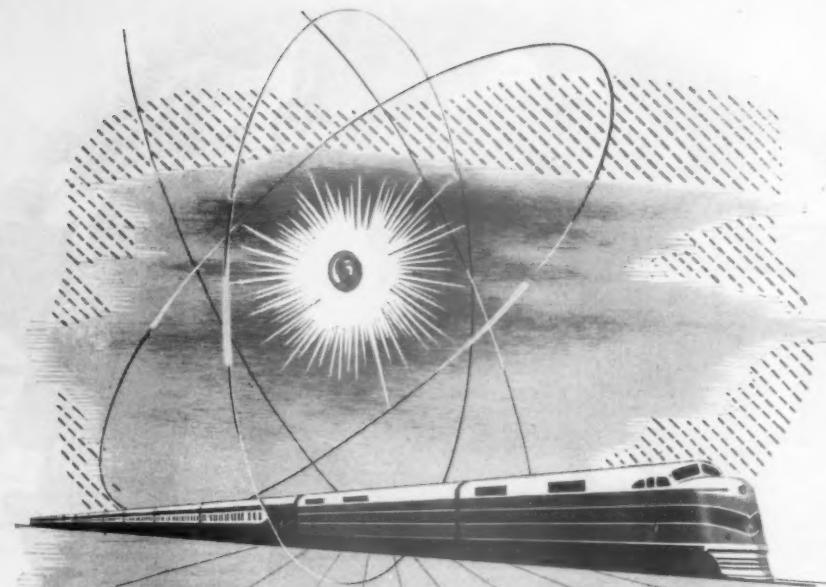
iron main, temporarily uncovered for inspection, when it was 105 years old. It is today in its 109th year of consecutive service. Can you wonder that long-lived cast iron pipe enjoys a reputation among water works engineers as Public Tax-Saver No. 1?

NO. 1 TAX SAVER

CAST IRON

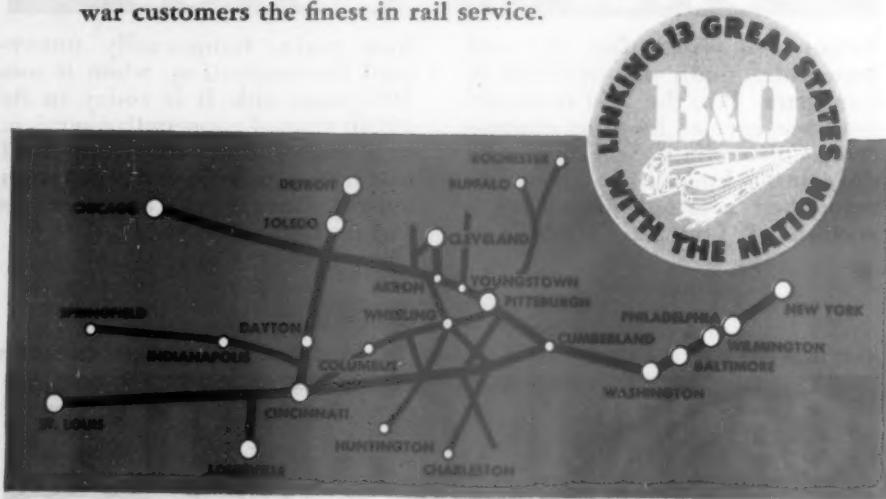
CAST IRON PIPE RESEARCH ASS'N, THOMAS F. WOLFE, ENGINEER, 122 S. MICHIGAN AVE., CHICAGO 3

CAST IRON PIPE
SERVES FOR CENTURIES



Harnessing the Electron FOR FASTER, SAFER RAIL TRAVEL

● YESTERDAY, electronics was the dream of science. Today, it directs the fire of big naval guns, detects the presence of enemy aircraft, and treats diseases hitherto considered incurable. Tomorrow, the power of the mighty electron may aid in bringing more speed, increased safety to rail travel. ★ Even now, some of America's outstanding scientists are exploring the use of electronics in railroading. Studies and experiments for the Baltimore & Ohio, for example, are being made to determine the applications of electronics in radio communication between stations and trains and between train crews—all with an eye to increasing post-war speed and safety. ★ The "harnessing of the electron" is one of the many projects currently being undertaken by the Baltimore & Ohio so that it may bring to its post-war customers the finest in rail service.



BALTIMORE & OHIO RAILROAD

Mr. Seek then writes to Mr. Wise. Mr. Wise replies.

Mr. Seek then writes a thank you letter to Mr. Wise.

Our enthusiast insists that propriety, speed, practicality—everything but tradition—would have been better served had Mr. Brown sent Seek's original letter on to Mr. Wise and mailed his carbon copy to Mr. Seek.

Having played the part of Brown in this routine for years, we got to feeling so guilty we didn't answer the letter at all. But we're printing this as a promise to do better.

Not simple

WHEN business seemed a simple matter of making and selling, NATION'S BUSINESS used to talk about its complexity—how a boom in Eskimo pies was reflected in new markets for pianos in Uruguay. Little did we know in 1924 what 1944 might hold!

For instance: The tire companies seem on their way to becoming the largest users of alcohol.

Ah, the complexity of business! Waiter, Old Overholt tires all around, please and another mug of that Texaco beer.

Preview of 1971?

THE Treasury Department is still trying to get rid of some 100,000 wood and metal bolo scabbards left over from World War I.

Ever play cobbler?

AS LONG as Noah Webster is not here to offer an apology for calling a cobbler a shoe repair man we will gladly do it for him. Or are we presumptuous?

Last month, in our ignorance, we used the word "cobbler" in referring to the craftsman who helps us make our shoe stamps last longer; and in so doing we innocently hurt the feelings of many shoe finders and repairers. Also, we brought the displeasure of the National Leather and Shoe Finders Association upon our heads! It seems that for more than thirty years the good NL & SFA has been trying hard to fight down that designation of a high grade shoe workman as a "cobbler."

In the letter from the Association we were told to consult Webster. We did. This is what we found:

COBBLER:

1. A mender of shoes.
2. A clumsy or coarse workman; a botcher.
3. A drink made of wine, sugar, sliced orange, lemon etc., and pounded ice (a sherry cobbler).
4. A deep dish fruit pie with a thick upper crust (apple cobbler).
5. Fortescue (an Australian fish).
6. The killifish: Cobblerfish.
7. The game of cobnut (English); the nut used.

See! Apparently we are cobblers (definition No. 2). Are we mortified? We're going out and drink a cobbler.

SALESMEN WANTED...

WE are now accepting applications from men in the armed forces and from others for peacetime work selling Addressograph and Multigraph equipment.

With the end of the war we believe competition in American business will be keener than ever. We believe the companies with high costs and low efficiency will be forced out of the running. Because all of our products are designed with one purpose . . . to cut business costs and improve efficiency . . . we expect our sales to increase tremendously after the war.

Every business that makes or sells *any* product or renders a service is a prospect for Addressograph or Multigraph equipment or both.

In addition to all of our own men, now on leaves of absence in the armed forces, we expect to add more than two hundred salesmen to our established offices in all parts of the country. Salesmen will once again be *job makers*. Our preference is for industrious young men with selling ability who are familiar with office or factory systems and methods, accounting procedures or similar business operations. If you feel you can qualify for the job of selling Addressograph-Multigraph simplified business methods to American business, write us now giving full information about yourself and your business background.

Write The Addressograph-Multigraph Corporation, Cleveland 17, Ohio.

Addressograph-Multigraph Corporation

SIMPLIFIED BUSINESS METHODS



AFTER

Will I have a warm home this winter?

That's a hard question to answer, but it looks more and more likely that you *will* have enough heat, if you heat with Bituminous Coal.

But don't think of your family's dependence on coal just in terms of heat. Quite aside from that, you depend on Bituminous Coal in ways you may never have thought of! Every time you turn on the light, listen to the radio—every way in which you use electricity in the home—the chances are that Bituminous Coal produced the electric power. Coal pulls nearly all trains. It makes *all* of our steel. More than 200,000 different products depend on coal.

Yes, American civilization is *built* on Bituminous Coal! And last year the U. S. Bituminous Coal industry mined more coal than had ever been taken out of the ground in any country at any time in the history of the world.

What Can I Do? . . . You can help the attractive picture of a warm home, shown above, to come true for you. Burn your coal efficiently. And order your supply of Bituminous Coal now. In that way you help the men who mine the coal, the railroads that transport it, your local coal dealer, and your own family.

BITUMINOUS COAL
Institute

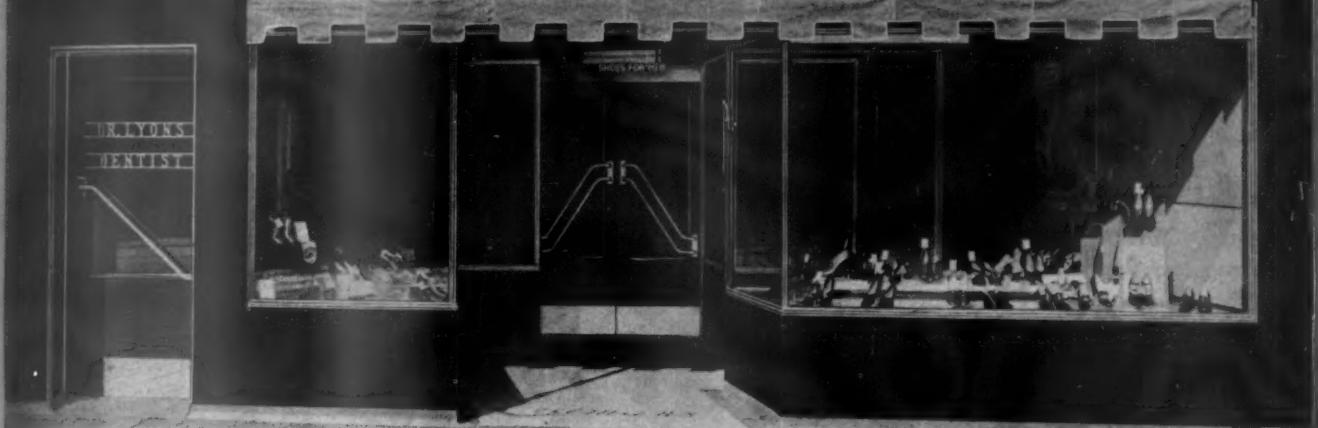
60 East 42nd Street, New York 17, N. Y.

ENLIST YOUR SAVINGS IN WAR BONDS

If you are
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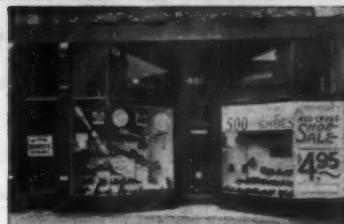
ERDMAN'S SHOES



AFTER

A BETTER-LOOKING STORE means a better-paying business. Plan now to make your store more attractive . . . inside and out . . . with Pittsburgh Glass. This store in Norwood, Ohio, is an example of how it's done. Architect: William Brug.

BEFORE



The store with *Eye-appeal*
INSIDE AND OUT

is the store that draws the crowd!

Plan NOW to make your store more attractive . . . and
get your share of postwar business.

If you can widen your trading area, attract new customers, satisfy old customers better, and get the jump on competition, you're on the way to fat profits and prosperity.

And that's where Pittsburgh Glass comes in! When you make the *interior* of your store smart, modern and appealing with Pittsburgh Glass

... when you give personality and stopping power to your store *front* with Pittsburgh Glass and Store Front Metal . . . you've gone a long way toward insuring success. Thousands of merchants have already proved, with Pittsburgh Glass, that the store with eye-appeal is the store that gets the business.

"PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH GLASS

for Store Fronts and Interiors

PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2518-4 Grant Building, Pittsburgh 10, Pa.
Please send me, without obligation, your
illustrated booklets on store modernization.

Name _____

Address _____

City _____ State _____



**It takes tons
of PAPER to produce
and refine oil**

A black flood of oil, five million barrels of it, must daily quench the titanic thirst of the Allied war machine and industry... Paper makes this possible.

For on paper are recorded man-made earthquakes, which wrest from Earth the secrets of its petroleum treasures. And paper pressure and flow charts do sentry duty over oil pipe lines, guard against costly leaks.

By means of paper graphs, petroleum is steered on its complicated course through the refinery—from the crude oil stage to high-test gasoline.

Yes, paper is an essentiality, the busy servant of the petroleum industry. Millions of pounds of paper annually aid in the production of petroleum for our armed forces.

Levelcoat^{*} PRINTING PAPERS

While conserving America's critical resources in every way possible, Kimberly-Clark is producing the finest quality Levelcoat Printing Papers that can be made under wartime limitations.

*TRADE MARK



SAVE WASTE PAPER—Paper is one of the nation's most critical materials. Help alleviate the paper shortage by making full use of each piece and by having all your waste paper collected regularly.



**KIMBERLY
CLARK
CORPORATION**

NEENAH, WISCONSIN

Blacksmiths by the millions!

"And the children coming home from school

*Look in at the open door;
They love to see the flaming forge,
And bear the bellows roar..."*

CHILDREN dropping into General Motors nowadays would see both flaming forges and roaring bellows — lots of them.

But they would see, in addition, millions of little, mechanical blacksmiths doing a strange and fascinating job.

We call it "shot-blasting," and it consists of shooting little steel balls by compressed air at steel surfaces. Every time a little ball hits, it puts the surface under compression. It hardens, strengthens, and the breaking point moves up.

Up to wartime, shot-blasting was one

of the many techniques General Motors engineers adopted and developed to make more and better things for more people. Your own car benefited from it.

But suddenly the sky began to fill with rolling, leaping, stunting planes — training for combat. And the straining connecting rods and other vital parts in those planes needed special treatment to keep surface cracks from opening.

Shot-blasting moved in on the job. And those millions of little blacksmiths beat and hardened the surfaces of those parts until they were the toughest ever known.

This very day, pilots diving our cannon-bearing planes on enemy tanks ride safer because of this



peacetime technique. And that white-starred streak you see in the sky — twisting, rolling, climbing — flies on shafts able to resist the great strains and stresses set up in action.

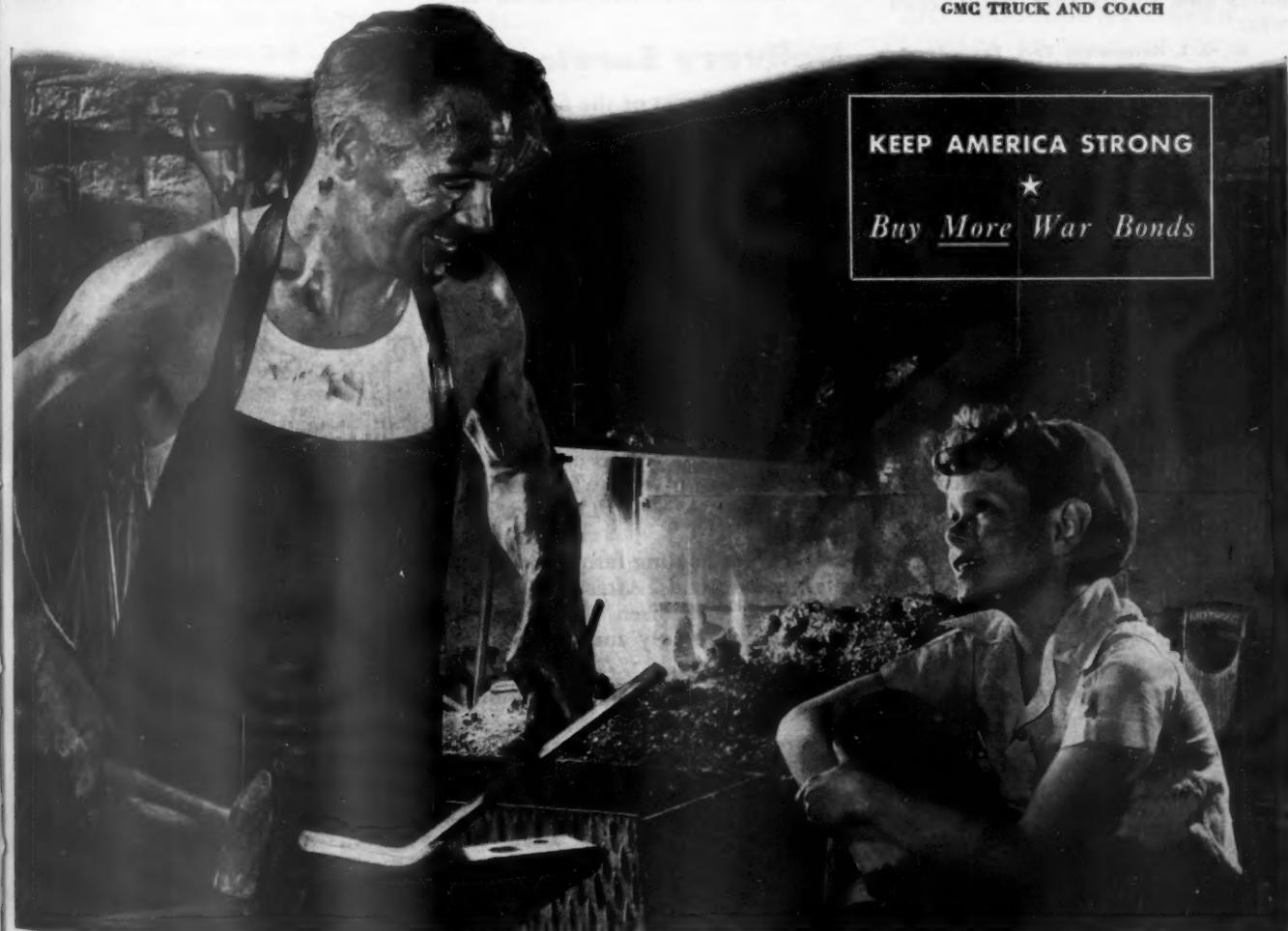
America's industrial records are filled with many such highly developed techniques because, in our land, men receive just rewards for their enterprise.

This idea of just rewards helped make our country so good to live in. It has clearly demonstrated its value in war. And it holds the certain promise of more and better things for more people in the fruitful years ahead.

GENERAL MOTORS

"VICTORY IS OUR BUSINESS"

CHEVROLET • PONTIAC • OLDSMOBILE • BUICK
CADILLAC • BODY BY FISHER • FRIGIDAIRE
GMC TRUCK AND COACH



KEEP AMERICA STRONG

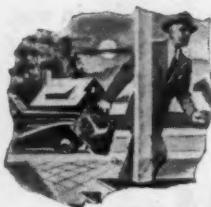


Buy More War Bonds

ALL AMERICA'S CHEERING GOOD YEAR

MILEAGE

If you've wondered about the quality of synthetic rubber passenger car tires, here's your answer. From essential drivers who have purchased millions of Goodyear all-synthetic rubber tires in the past year, come countless



Doctor

"I am more than pleased with the service one of your synthetic tires is giving. I frequently travel rough country roads and on hurry calls have to drive at fast speeds. So far this tire has run 16,100 miles and shows very little tread wear."

Dr. G. L. Hartenstein, York, Pennsylvania

Taxi Fleet

"At present we have more than 200 of your synthetic tires on our fleet. 150 of them have already delivered better than 20,000 miles without recapping and I believe with recaps they will average 35,000 miles each. You should be proud of this splendid mileage performance."

Shreveport Yellow Cab Co., Shreveport, La.

War Worker

"I have two Goodyear synthetics on my car that carries six passengers every day to Schenectady war plants—a 110-mile round trip. They've now gone 25,775 miles without trouble, and do not show too much wear. I'm thoroughly sold on Goodyear synthetic tires."

Robert Smith, Lake George, New York

reports like these—proof that the Goodyear Research Laboratory's twenty years' experience in improving synthetics insures exceptional tire performance, regardless of where you live, or what kind of work you do.



Oilman

"I am in the oil business and much of my travel is over rough roads. In six months I have put 12,000 miles on three synthetic Goodyear tires and they are still in fine condition, the treads being scarcely worn. Needless to say, I am well pleased."

R. C. Stoner, Hollywood, California

Builder

"On July 5, 1943 we purchased our first set of Goodyear synthetic tires. To date they have been driven 28,000 miles and the treads appear to be about 50% worn. If this is a sample of the mileage from Goodyear synthetics, we'll have no hesitancy about them in the future."

W. E. Callahan Construction Co., Dallas, Texas

Delivery Service

"I purchased two of the first 6.50-16 Goodyear synthetic tires in this part of Iowa. They have given 35,000 miles of service and from the amount of tread design left I will get around 20,000 more miles. I am more than satisfied with your synthetic tires."

John A. Linneman, Burlington, Iowa



Farmer

"Accept my unqualified endorsement of your De Luxe synthetic tires. I have two used in hauling farm produce on all kinds of roads. After 16,000 miles they have never been off the wheels, are wearing evenly and have lots of tread left."

P. H. Adams, Gulfport, Mississippi

EXCLUSIVE FEATURES THAT MAKE GOODYEARS WEAR LONGER

1. Twenty years' experience with synthetic rubber
2. A tough, sturdy carcass of prewar quality, low stretch Supertwist cord
3. Tested non-skid safety from time-proved Goodyear tread design
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5. Greater experience and skill evidenced by Goodyear's record in building more than 350,000,000 pneumatic tires—millions more than any other manufacturer

Supertwist-T. M. The Goodyear Tire & Rubber Company

GOOD YEAR

THE GREATEST NAME IN RUBBER

MORE PEOPLE RIDE ON GOOD YEAR TIRES THAN ON ANY OTHER KIND



MANAGEMENT'S *Washington* LETTER

A last minute roundup by a staff of Washington
observers of government and business

RECONVERSION IS UPON US—NOW!

It is the biggest responsibility—and the biggest opportunity—for American industry since launching of the defense program in 1940.

Liquidation of WPB controls will be swift and sudden following German military collapse—VE-day.

But remember—reconversion will proceed differently in each industry.

WPB plans only one preference rating in the era of half-peace half-war—those priorities necessary to assure material for Pacific; all other production will be unrated.

But tremendous backlog of civilian demand probably will mean informal rationing by manufacturers and distributors for at least six months.

However, Washington will not try to program civilian production.

Steel and copper controls, for example, will be continued only for the quarter in which hostilities end in Europe.

► RELAXATION OF MANPOWER CONTROLS will be less sweeping, but sufficiently flexible to meet regional needs, without the controls which have been in effect in recent months.

► PREDICTED 40 PER CENT CUT in military aircraft production will come in three chunks: 5% curtailment in 1944; 9% in first half of '45; 15% for last half of '45.

Cut-back schedule is based on maximum production peak of 8,000 units a month.

Heavy bombers, still scheduled at 1,500 per month, will be last type cut back; they are key to climactic Pacific operations.

► MAGNESIUM PRODUCTION schedule also has been cut back by 40%, to be accomplished gradually over next four months; current

monthly production of 23,000,000 pounds will be pinched in to 14,000,000.

Government-owned plants at Las Vegas and Gabbs, Nev., and Austin and Velasco, Texas, will release 4,300 workers.

Other basic industries soon will follow this war-boom cycle of magnesium.

► WPB PLAN to resume civilian production under "spot authorizations" from Regional Offices has proved cumbersome and slow, if not unworkable.

In first two weeks, 81 regional offices received 457 applications; acted on only three.

First three items approved—septic tanks, metal signs, household coal stokers.

Resumption plan permits immediate start on reconversion where both man-power and materials are at hand and not needed for war production in same community.

Informed Washington opinion anticipates "spot authorizations" will be abandoned without trace on VE-day—if not before!

► POSTWAR COSTS are industry's big problem.

Political factors up to this point have dictated strong hold-the-line efforts by OPA; but labor now presses for increased basic rates to make up for vanished war-time overtime.

If jobs are to be provided, management must have prices reflecting today's higher costs.

Labor policy is veering toward higher prices, if necessary to maintain pay rolls.

► WAR LABOR BOARD already is "surplus property" in the eyes of Congress, which is seeking a quick liquidation plan to become effective 30 days after German collapse.

Average number of strikes monthly in U.S. has been greater this year (432 a month) than in 1943 (312 a month) with highest month recorded in May, the last full month before D-day.

(Total U.S. strikes since Pearl Harbor, up to Sept. 1, were 10,139.)

Senate Labor Committee is considering a plan to return all WLB's mediation functions to Labor Department, and all semijudicial processes to NLRB; closing of all WLB regional offices, and complete elimination of WLB "advisory" recommendations.

► SURPLUS MACHINE TOOLS will be sold direct by Defense Plant Corporation, with

regional offices authorized to negotiate terms up to \$100,000 without Washington approval.

Contracts exceeding \$100,000 must be approved by DPC.

All sales must be for immediate use, not for storage or resale—a measure to stimulate postwar employment.

Catalog of tools now offered may be obtained from DPC branches in 22 principal cities.

Metals Reserve Co., another RFC subsidiary, is offering surplus bronze and copper screen in 16 cities.

Treasury Procurement Office offers a large surplus lot of cotton felt mattresses and pillows styled to Army specifications for single cots and bunks.

Inquiries for later items may be directed to Furniture Division, Treasury Procurement Office, Washington 25, D.C.

Treasury Automotive Division offers 30,000 surplus army vehicles, including 9,000 motorcycles, 2,000 passenger cars and 19,000 trucks, for sale "through regular trade channels."

► OPA CRACKDOWNS against price, rent and ration violators have almost doubled during past year—21,363 cases in first half of '44, against 24,205 for full 12 months of '43.

In addition, OPA summarily revoked 20,684 gasoline rations first six months this year.

Court actions included 2,191 criminal prosecutions; 5,436 civil suits; 8,540 treble-damage suits settled out of court, and 5,196 suspension-order proceedings.

Enforcement staff now comprises 484 attorneys and 2,688 paid investigators.

New system of local price panels authorizes settlements up to \$50 without court action. But negotiations with these panels is purely voluntary on part of the accused.

► INCOME TAX AMENDMENT to allow depreciation deduction on owner-occupied homes has been presented before House Ways & Means Committee, (H.R. 3886).

Present law authorizing home depreciation only on rented dwellings, penalizes owner-occupant thrift.

Amendment is endorsed by National Association of Real Estate Boards.

► U.S. FARM INCOME first seven months this year reported by Dept. of Agriculture at \$10.3 billions, up 10% from '43.

Index of cash farm receipts (minus

federal benefit payments) now stands about 260% of 1935-39 average; physical volume of marketings is 140 per cent of base period.

Leading States in cash farm income first six months this year (without federal payments): Iowa, \$866 million; California, \$683; Illinois, \$583; Texas, \$485; Minnesota, \$417 million.

Government payments in same period: Texas, \$30,654,000; Wisconsin, \$27,567,000; Illinois, \$26,932,000; California, \$24,832,000; Iowa, \$23,894,000.

► GOVERNMENT-OWNED STOCKS of farm products approaching \$1 billion in book value are taxing storage facilities. Some commodities still are being purchased by CCC because, under existing law, all price-support programs must be maintained at least two years after end of war.

Latest official report to Congress tabulated these government holdings (including items in process of sale):

Potatoes	315,861,600	pounds
Tobacco	163,851,715	"
Wool	230,666,649	"
Sugar	4,520,490,000	"
Cotton	1,322,506,000	"
Wheat	99,074,886	bushels
Oats	1,299,037	"

Miscellaneous commodities added up to \$50 million more, and "agricultural supplies" made another \$134 million in government storage.

Storage stocks of processed foods held by WFA and military depots are not included above, as CCC operations are limited to raw products.

► MEAT OUTLOOK for new crop-year beginning Oct. 1 indicates smaller U.S. production with little change in military and lend-lease requisitions; civilian rations will have to be cut, unless Government determines to reduce storage stocks sharply.

Our total livestock population will show a decrease of approximately 25 million units (8.7%) in 1944—principally because of feed shortage between April and October.

► SOCIAL SECURITY BILLS are the new rage in Congress, with 157 proposals pending in House and Senate for extending and liberalizing prevailing federal system.

One measure would offer free medical care to all recipients of public relief; another would extend unemployment insurance to Indians; another, to real estate salesmen; still another would ex-

tend old-age pensions to Puerto Rico; to all state civil servants.

Hardly a dozen of these proposals ever will command serious legislative attention; but the mountain of bills presented is a reliable index to campaign-year appeal of social security slogans.

► OPA EXPERIENCE with coal and wood stoves has produced a new attitude in official Washington toward all measures of national planning.

In 14 months of rationing, local price boards issued 800,000 certificates for heating stoves, and OPA allocated 720,000 units for civilian program—indicated deficit, 80,000 stoves!

But dealers everywhere reported a glut in stoves; urged that rationing be ended.

OPA check then disclosed that only 625,000 certificates actually had been used for purchases, leaving almost 100,000 units in dealers' hands, with no more ration certificates issuing.

In cook stoves, OPA issued 400,000 purchase certificates; allocated 365,000 stoves. But only 280,000 certificates were "cashed," leaving 85,000 stoves on market with no possible buyers.

Result: all rationing of coal and wood stoves ends Oct. 15.

Oil, gas and electric stoves, however, continue under ration program.

► COTTON TEXTILE ALLOCATIONS, currently about 21% under previous quarter, may be reduced further if manpower pinch is not relieved in textile areas.

Mills have lost about 75,000 workers, net, in first half year; and still losing about 6,000 monthly to military services and other industries. Says WPB: "Cotton textile production has been decreasing steadily since 1942."

WMC asks for 30,000 new textile workers by Nov. 1.

► FIRST POSTWAR SHIPPING ROUTES in Pacific, submitted to Maritime Commission by American President Lines, look to prompt restoration of prewar services to Hawaii, Philippines, Hong Kong and Singapore. (A preview of Allied military plans in Pacific theatre?)

Formerly operating only from Pacific ports, President Lines ask to base new trans-Pacific routes on both Atlantic and Pacific harbors, via Panama Canal.

A modern fleet of 30 vessels, mostly from wartime building program, will be placed in service if Commission approves application.

► BRITISH COAL PRODUCTION will be increased about 22 million tons a year by use of U.S. mining equipment now allocated, says report from Combined Resources Board.

Increased British production will reduce drain on U.S. bunker coal for Empire ships.

Because of shortage of trained operators, Britain cannot use all U.S. mining machinery now on hand; committee recommends shipments be stopped until present machinery surpluses are absorbed.

Britain will send 100 mine managers to U.S. for experience in application of U.S. mechanization methods.

Only about 20% of Britain's coal mines lend themselves to immediate modernization; remaining production—about 150 million tons a year—is not subject to American methods without drastic revision of prevailing mining, marketing and transport arrangements.

Combined Coal Committee is headed by A. S. Knoizen, Director, Mining Division, WPB.

► WASHINGTON BUSINESS BRIEFS: House Postwar Planning Committee (Colmer) warns that revived small business is key to full employment; heavy industries would do well to maintain present pay rolls....Construction industry sees immediate postwar market for 4.5 billions, if financing and specifications arranged well in advance; could employ 2 million people in place of present 700,000.... U.S. synthetic rubber program produced 557,000 long tons during last 12 months at average of 34.4 cents per pound; our total investment, government and private, about \$750 million, assures complete freedom from cartel price gouge, as 1921....Federal debt now stands at \$213 billion, against \$23 billion 10 years ago; management of debt through long term and non-maturing bonds already keeping Treasury experts awake nights.

...Administration planners have finished detailed blueprints for a Missouri Valley Authority, to duplicate TVA in Middlewest, from St. Louis to Montana....U.S. war expenditures have dropped to \$275 million a day; high point was \$306 million daily in June, 1944....Treasury now operates 268 "banks" at Army and Navy posts throughout the world....Alien Property Custodian has 2,048 patents available for non-exclusive licenses at \$15 each.... UNRRA estimates rehabilitation of Europe's transportation system will cost \$10 billion over next ten years....



BUY MORE WAR BONDS

40 Years of Growing With America

Since 1904, Reo has woven a bright pattern of service into the warp and woof of American farm life. Particularly vivid in rural memory is the trail of the Reo Speedwagon, leaving its mark on soil and soul alike . . . giving complete dependability and economy in field work and crop marketing, bringing Saturday night movies and Sunday meetings many miles closer to farm homes. After 40 years of growing with America, Reo is serving on the farm front and on world battlefronts and is preparing for new records after the war. Ask your Reo dealer about the government release of a limited quota of new Reo trucks for civilian use.

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SOVPHOTO

At Mr. Johnston's conference with Marshal Stalin were Commissar Molotov and Ambassador Harriman

A Business View of Russia

By ERIC JOHNSTON

RUSSIA gives the visitor the impression of being the most self-confident country in the world. That is the one inescapable conclusion I bring back after six weeks in the course of which I was permitted to go anywhere I wished and to see anything I requested in the Soviet Union.

The Russian people have seen the Red Army crushing the Nazi invaders. They have seen how their country is being industrialized and know that the lathe worker of today was an unskilled peasant boy or girl a year ago. They are proud of their accomplishments. In spite of her industrialization, however, Russia still has a long, long way to go before approaching America's productive capacity.

But they venerate the United States—not because of its system of government about which they know little—but because it is the greatest industrial nation in the world.

That was not always so. As recently as a few years ago Russian leaders believed that capitalism could not stand the test of war. Today, having seen our war production, those same men are

RUSSIA'S system is distinctly different from ours, yet the president of the Chamber of Commerce believes we can get along with each other by trading goods and each leaving our political beliefs at home

convinced that capitalism works in the United States.

As you might expect, they are equally convinced that their system is best for Russia.

They call that system State Socialism. How it is defined is no concern of ours, but how it works concerns us vitally, because, in the postwar world, Russia is going to turn to the United States for the multitude of things she will need not only to rebuild her war-worn economy but to give her people the higher standard of living she has been promising them for 20 years.

That vision of Russia's future is in the mind of every official whom I met in 10,000 miles of travel back and forth across the country from Moscow to

Leningrad, to the Urals, to Siberia, to the Asiatic republics. I heard it in factories making airplanes, textiles, chemicals, automobiles, tires, ball bearings and munitions; in steel mills; on collective and experimental farms which, in Russia, whether they raise furs, chickens, vegetables or livestock, are actually regarded and operated as agrarian factories.

It made up the greater part of my three-hour discussion with Joseph Stalin.

Acknowledging the superior quality of American equipment, the Russian leader looks forward to a continuing flow of supplies for postwar replacement, reconstruction and expansion. The major need, as he sees it, will be mining

machinery, with tools, factory and railroad equipment, hydroelectric plants and road machinery high on the list.

In payment, he believes that the United States can import many things from Russia—copper, manganese, tungsten, platinum, cobalt, nickel, timber, oil, flax and other agricultural products not generally produced here. Some of these, like copper, could be stockpiled.

Credit will be needed

IN the beginning, at least, credit will be the nub of our trade with the Soviet. Russia's need for our machinery and equipment will be immediate.

Our need for her products will be less urgent. Short term credits of five years or less, medium credits of five to ten years and longer terms up to 30 years have been mentioned but terms and the question of how such credits shall be negotiated must be worked out in the future.

Whatever the terms, every official with whom I talked insisted that the Government, which is the only importer or purchaser in Russia, will make no commitments that cannot be kept. The Soviet record for payment justifies this optimism.

"We can't afford the luxury of defaults," was the way one official put it.

All of this implies that Russia will be, if not our biggest, at least our most eager customer when the war ends. Moreover, for many years at least, it is unlikely that she will sell on the world markets in competition with us. She will need to sell some things for exchange, of course.

"It will be years," said one official, "before we can meet our home demands and raise our own standard of living. We will need all we produce."

A Swedish economist has estimated that it will take ten years to satisfy the demands for sewing machines, longer for automobiles, vacuum cleaners, refrigerators and other things that America regards as necessities. Few of Russia's 200,000,000 people have ever seen a washing machine; the only radio in many villages is in the community house; thousands of miles of road are unpaved.

In the face of such drastic shortages, the Russian worker today has few comforts. There is little for him to buy although he is moderately well paid.

The average worker receives between 800 and 900 rubles a month (a ruble is 19 cents). All pay is on a piece-work basis. A person who exceeds the "norm" receives a bonus. It is not unusual for a successful factory manager whose plant has exceeded the norm to receive 10,000

rubles a month. Considering that all factories are government owned and the "industrial trust" handles all problems of supply, "selling," and policy, the factory manager's job is actually that of production superintendent.

There is little he can do with his pay, as practically no consumer goods are being made.

But, since prices in the rationed stores are moderate, even the holder of the highest type bread card—and there are more than 100 types of cards—would undoubtedly have money left after buying his allotment of rationed necessities. With his extra money he might go to the theater—which is excellent and cheap—he might buy unrationed goods at the special stores that handle them, or patronize the markets where farmers sell the produce from the small plots of ground which each of them is permitted to plant or which they receive as part payment for work on collective farms.

But he will find prices forbidding in non-rationed stores. A second-hand suit of clothes costs 3,000 rubles; a pound of sugar, 400 rubles; a pair of shoes 2,000.

As a result many workers put their money, above living expenses, into government bonds. It is not uncommon for the patriotic worker to give part of his

factory machine how she enjoyed her work. Her answer was typical of others I received:

"I'm glad to work hard to produce the weapons to beat the Fascist savages."

She added that she had lost two brothers and a husband in the war. Russia has lost a tragic multitude of its young men but her postwar industry will find replacements ready. Just as it sends its young men into the military, every community sends a fixed proportion of its boys and girls between 14 and 17 to government technical, factory and railroad schools.

The training of the Russian does not stop with the youth. In newspapers, movies, radio and the ballet he is told to work for the common objective.

The mental picture I formed of Russia is far from complete. Although every facility was placed at my disposal, I must frankly admit that there is much about the Soviet Union which I do not understand. I come back an amateur on Russia, but glad of the experience.

But, the French have a saying, "To go away is to die a little." We in America should have one to match it:

"To come home is to live again."

That has been my feeling each time I have returned to America from visits to

South America, to Mexico, to Russia—even to England, whose people are nearest to us in language, tradition, political and social theories and way of life.

American life

BACK home, I found the American people cheerfully arguing if it wasn't time to change the administration of their government. Political leaders were appealing to the sovereign Americans to return them, or elect them, to office.

Around our shops and factories were thousands of automobiles, the property of the workers. The tires of the manager's car looked no better than the employees', his gas ration sticker was no different from theirs.

I was again on trains which required only the passport of a railroad ticket.

I was home, with those "strange, strange, free people," who walked with a swing such as was never seen—who thought for themselves, grovelled before no man, knew no awe of any man," as Kenneth Roberts has described them.

Do we have troubles at home? Certainly. Do we worry about postwar unemployment, taxes, overproduction or underconsumption? You bet.

Can we solve our problems? Yes—if America will believe in her genius as fully as I found Russia to believe in the genius of American production.



Mr. Johnston inspects the Stalin Automobile plant in Moscow with its director, I. Likhachev

bonds back to the Government as his participation in a national holiday or a smashing military victory. I was told that a considerable part of the Soviet internal debt has been liquidated in this way.

On the streets one sees many individuals proudly wearing medals as proof of their contributions toward a greater Russia which seems destined to take her place among the great producing nations of the world.

I asked a muscular young woman at a

Management Holds the Scales

Underpaid Investors Mean Low-Paid Jobs

By ENDERS M. VOORHEES¹



RALPH PATTERSON

"THE responsibility of management is to bring together and balance natural resources, tools, workers and customers"

LET ME START with the assumption that it is proper for stockholders to be dissatisfied with their dividends, for workers to be dissatisfied with their wages, and for customers to grouse about prices. Let me go further and say that, if any group be satisfied at any one time, there may well be something wrong about the division and that, if all groups ever happen to be satisfied, something is probably very wrong with prices or some other basic element, because complete content with the present and with the future would be akin in our economic body to disorder in the physical body.

It is the function of management to obtain enough return on the property entrusted to it so that the owners will continue to think it worth while being owners; to pay enough wages to the workers so that they will think it worth while to work, and at the same time to combine the property of the owners and the efforts of the workers in such fashion as to produce goods and services that customers will think it worth while to buy.

The results of good management can never fully satisfy everybody. Management has the responsibility for improving the quality of product and of increasing its quantity. This process of producing more and better goods makes possible an increased exchange of goods and services in the whole economy. This

increased exchange in turn increases the ultimate number of jobs and raises the national scale of living.

The responsibility of management is to bring together and balance natural resources, tools, workers and customers. Management must so manage a business that it will always be strong and healthy and therefore capable of rendering a full service to the community. They must, through science, research, invention and judgment, provide those products which the customers will buy tomorrow.

In addition to making the best possible products, management must do an intensive merchandising job to inform customers of the advantages of its products. The difference between good management and bad management is not merely one of attitude. No management can be called good that does not produce ever more and ever better goods while operating within the rigid frameworks of the money that the customer gives in exchange for goods and services and the tools supplied by the owners.

Managers today cannot afford to be

guided by anything other than their judgment on the best data they can assemble. I am not using the word "fact"—it is overworked and rather tired. A fact today seems to depend largely on where the collector of the facts sits. That is why we have social battles to unbalance the ex-

change relationships between workers, owners and customers, even though virtually all people simultaneously belong in each category.

The point that I want to make—and it is a point of primary importance—is that if managers are guided by other than the truth as it is, they will be working an injustice to some group and the eventual consequence of that injustice will be injury to and perhaps the destruction of the property in their hands and a disturbance in the service of supply on which we must all depend for our livelihoods and on which the State depends for its being.

The Steelworkers' Union, for instance, in the present dispute over the rate of steel wages has trotted out a few alleged examples of almost abject poverty among steel workers. However, considering the average of weekly steel wages over the past few years I would take the exhibits as examples of how bad some housekeepers can be.

But that is beside the point.

It is also beside the point for the stockholders to organize tattered squads to show that widows and orphans cannot

¹Chairman Finance Committee, United States Steel Corporation.

live on the dividends that they receive.

The managers can distribute only what is there to distribute. The cost of living either among workers or stockholders has nothing whatsoever to do with the case. If we try to adjust the costs of business to the costs of living, we shall shortly find ourselves moving away from earth in an ascending spiral that will at some point collapse. If prices and the wages to both owners and workers are out of balance, the remedy is to be sought either in the management of the business unit or in the governmental atmosphere in which the business is working, or in both.

Government depends on force

THE remedy is not to be sought in turning the whole mess over to the Government because the Government can do nothing in such a situation except exercise its powers of compulsion and these powers of compulsion eventually get around to saying: "Take it and like it."

It is not honest to pretend that there is a system which will distribute more than is produced—a system that can divorce the obtaining of goods from the effort of producing them.

Some presently offered theories of what is called social reform, if one thinks them through, are bound to get mired in a marsh of absurdity. That is, I believe, due largely to the delusion that a large business is somehow not dependent on its customers. Misinterpretation of modern accounting forms has encouraged this delusion.

Of necessity, the accounting has to be in dollars instead of in goods and the sums in a very large company have such an array of ciphers that they may mean little more to the average person than an exercise in astronomy. The accounting of a large company, if it is to be complete, must have certain technical

U. S. STEEL'S RECORD

ITEMS	1902 (First Year)	1943 (Latest Year)	Per cent Increase
Tons of Steel Bought by Customers	8,912,805	20,147,616	126
Tools Provided by Owners	\$689,259,777	\$1,755,849,084	155
Number of Workers	168,127	340,498	103
Total Hours Worked	599,774,451	749,819,696	25
Pounds of Steel Per Hour of Work	30	54	80
Hours Worked Per Week Per Worker	68.4	42.2	-38
Average Earnings Per Week Per Worker	\$ 13.75	\$ 48.94	256
Income	\$ 90,306,525	\$ 63,448,546	-30

complexities which bar its comprehension except by those trained in accounting. Therefore, the Government, the workers and the people have often called on companies to do that which is not in their power to do.

U. S. Steel, if one attempts to look at it in detail, may seem to be complex. But, reduced to its elements, it is entirely simple. U. S. Steel can exist only as it promotes the production of more and better goods for the customer. U. S. Steel is broadly only a consolidation or gathering together of the tools of production and exchange. By tools of production I mean manufacturing plants, mines, railways, steamships, warehouses and the like. By tools of exchange I mean such things as cash, accounts receivable and stocks of goods needed to make the exchanges. U. S. Steel uses these tools of production and exchange, sometimes called capital, to do more and to do it better than could the individual. That is why U. S. Steel came into being.

That is the reason for its continued existence.

U. S. Steel can exist only on what it gets from its customers.

That is the only way it could exist under any known system of communal or state ownership.

If U. S. Steel and all other corporations were owned by the State, they would have to get some goods from other State-owned corporations. Of course tools and machinery would wear out regardless of their ownership, and although taxes would not be paid as such, they would have to be collected in goods and services from some portion of the economy if the Government were to be supported. Fooling oneself on bookkeeping is not social reform, although there seems to be a tendency for social reformers to advocate bad bookkeeping.

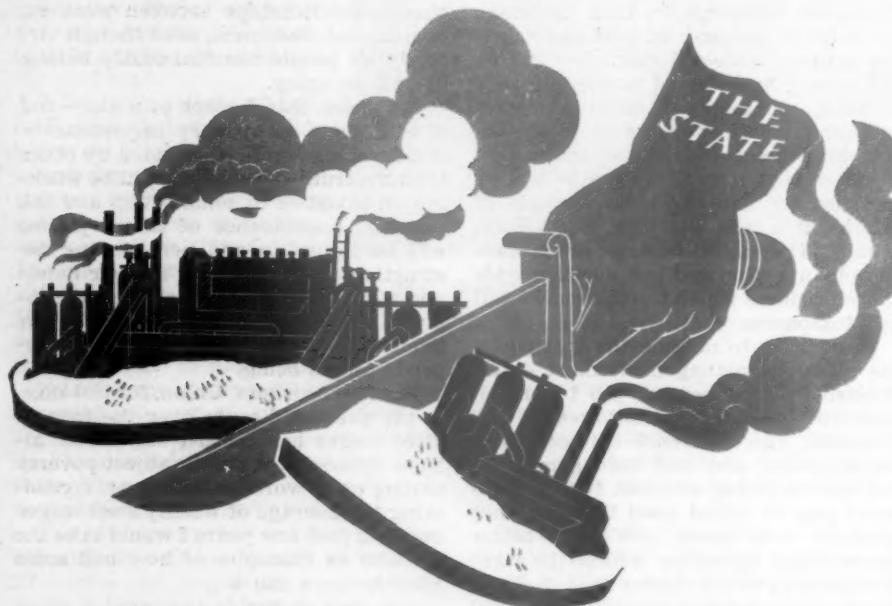
A limit to division

SO, whatever the form of ownership, the workers and the owners in any unit would get down to dividing the product of that unit and, if the owner happened to be the State, the situation would not differ from that under private ownership except that the State would have the power to dictate the division. It could increase the amount to be given to any particular unit only by taking away a part of the product of some other unit.

Thus we should never be so preoccupied about a too-selfish division between owners and workers as to lose sight of the paramount importance of maintaining a free flow of tools so that workers may be employed. Any division which retards the voluntary flow of tools must diminish the tools available for workers and therefore diminish their opportunity to exchange their services at other than the rate for brute strength.

We in U. S. Steel have made extensive studies of the effect on output and wages of the tools provided by the owners. The comparisons, by the very nature of things, are not as accurate as the figures would seem to indicate, because the quality of steel has steadily improved

(Continued on page 94)



The State would have the power to dictate division, could add to one unit's portion by taking away from another

How Big is Reconversion?

By DONN LAYNE

ONLY A PART of industry faces the need of reconversion, but other phases of industry and distribution must wait on that part

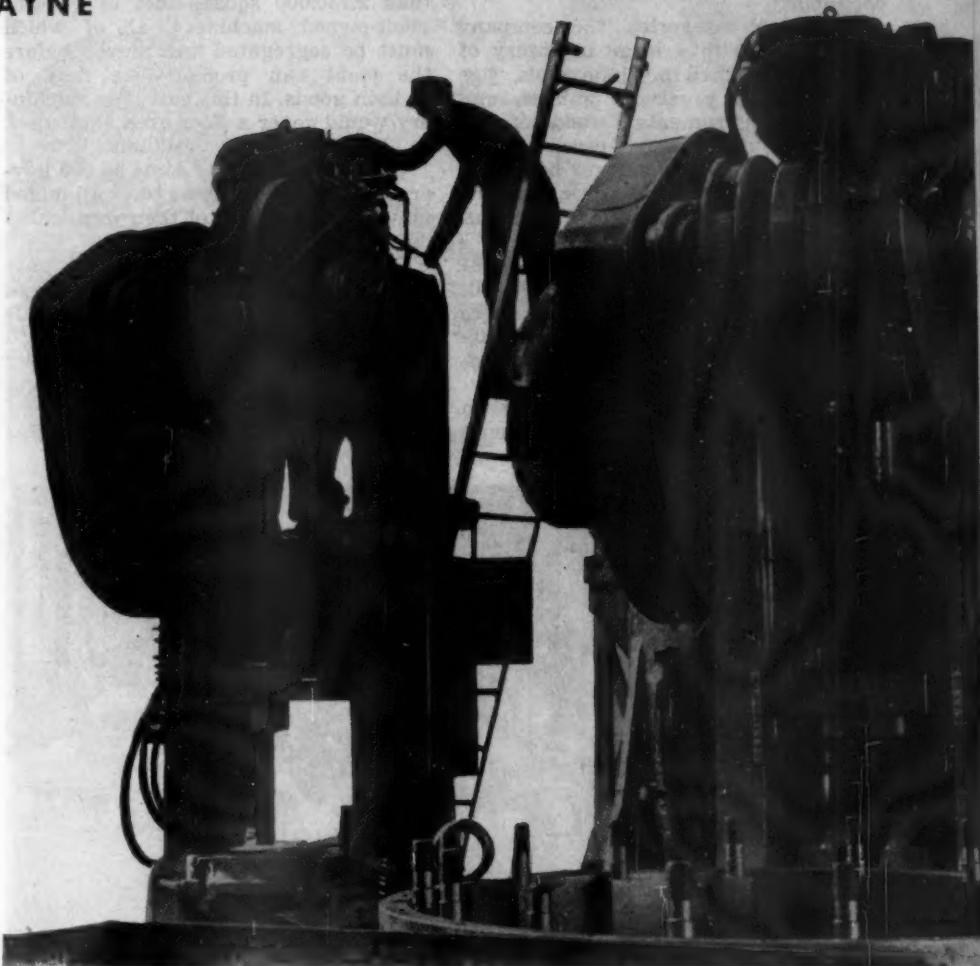
ANY EFFORT to estimate the size of the reconversion job that must be done before we are able to buy the civilian goods we have been wearing out in wartime must begin with the knowledge that, actually, only a dozen or so industries will need to reconvert at all.

That does not mean that they alone have been carrying the war effort. It means that some companies were able to make their contribution to victory simply by manufacturing more of pretty much what they always made. Others changed their products but not their equipment—and some were able, with only slight changes, to make their production facilities fit special requirements of war.

When peace comes these companies will be able to return fairly readily to peacetime production. However, if we are to have the prosperity for which we hope, our durable goods industries will have to handle a tremendous reconversion job in the shortest possible time.

The majority of the mass fabricating industries—automobile, and major parts, for example—are turning out products entirely different from, and but little related to, the requirements of peace. In many cases, their conversion to war production was total.

When they went into the war effort they hastily removed many thousands of machine tools, ripped out conveyor and assembly lines, got millions of dollars' worth of equipment and materials out of the way. Some machine tools that could be used were relocated. Others were lent or sold to those who could use them. Of the machines that could not be used, a few were junked; the rest were greased, wrapped and stored outdoors—with maybe a sheet of canvas, or tar paper, or a board or two, placed over them for protection against the weather (at an average expense of about \$300 per machine).



Today within factory walls are millions of tons of government-owned machine tools which must be disposed of before reconversion can begin

Entire plants were rearranged and filled with both privately and government-owned machine tools and equipment, much of it especially designed for making war materials. Plants which could not be used were lent to other companies or to the armed forces.

In a hurry to win war

ALL of this was done quickly and without red tape, because the manufacturers were responsible to no one but themselves for what they did with their own property, and because they trusted both the Government and one another. Besides, there was a war to be won.

Reconverting to civilian production is not simply the same physical job in reverse. In the first place, it requires a terrific "house-cleaning" job.

Today, within and without the factory walls of the automotive industry

alone are millions of tons and billions of dollars' worth of government-owned machine tools, equipment and materials, some in use, some not, and much of it obsolete. And all of it must be removed before reconversion can even begin. Much of the material, both finished and partly so, is of no use either to the war effort or civilian production.

George Romney, managing director of the Automotive Council for War Production, cites the case of just one automobile factory, "—where as much as 30 acres of space, both indoors and out, is currently occupied by parts and materials from a cancelled tank contract. The original production schedule under the contract called for delivery of 7,040 vehicles but, after 2,728 had been manufactured, operations were ordered stopped.

"Left from the contract were 13,783 tons of high grade steel valued at

\$785,065, or about \$55 a ton. When all plans to dispose of the entire lot failed, 7,000 steel users were asked to bid on the material, item by item. Approximately 5,503 tons were disposed of over a period of several months at an average price of \$48 a ton. The rest is taking up space in the company's yards, nearly ten months after it became a surplus commodity.

"In other categories, the company found itself with a large inventory of specially designed machine tools, jigs and fixtures, precision gauges and measuring instruments. Outside of machine tools, only a small percentage of the equipment was found to be usable on other war production work and none will be adaptable to motor car manufacture.

"Among the surplus items are 2,691 jigs and fixtures which cost \$8,000,000; 4,347 special tools such as drills, cutters and reamers with a valuation of \$5,000,000; 14,285 gauges and measuring instruments valued at \$520,000.

"Similar facts were turned up on such items as machine tools, dies, foun-

than the bomber plant at Willow Run—and all jammed with government-owned machinery, war materials and work in process.

Unscrambling mixed tools

A THIRD company has the job of unscrambling from its own facilities more than 2,750,000 square feet of government-owned machinery, all of which must be segregated and moved before the plant can produce one item of civilian goods. In this case, the machinery would cover a floor area equivalent to about 25 Yankee Stadiums.

General Motors has some 56,000 government-owned machine tools all mixed up with some 85,000 of their own in 105 different plants.

Chrysler has more than 19,000 government-owned machines scattered among its own equipment in three different cities.

Multiply these examples by five—by ten, even—and the size of the moving job can be partially appreciated.

One might ask, why not move all this

machinery and stuff right out as soon as the war ends or the contracts are cancelled? Unfortunately that can't be done. Each manufacturer is the guardian of all government-owned machines, materials and equipment under his roof and in his yards. None of it can be moved or disposed of without government permission, and it must all be inventoried before claims for settlement can be presented. Such inventories, made up of thousands of different parts, will take days, weeks, maybe months to complete. As one official of the automotive industry put it:

"There are not enough experienced auditors, checkers and appraisers in the country to finish the job in five years!"

He is perhaps unduly pessimistic but, even under favorable settlement conditions, it will take the automobile makers some two to six months to reconvert and get under production. Even then they will have to produce 500,000 units before their 50,000 dealers are stocked with ten cars each.

Other industries have problems similar in kind if not in degree. Canning machinery and supplies, farm implements, hardware equipment, household equipment (electric irons, ranges, refrigerators, vacuum cleaners and washing machines), office and store equipment (bookkeeping machines, cash registers, scales, typewriters), electric motors and radios, all will require from two to six months before reconversion is finished and dealer stocks partly replenished.

On the other hand, the aircraft and ship-building industries, together with their various parts and equipment makers, do not face much of a reconversion job. Theirs is more a problem of tremendous curtailment of both production

(Continued on page 78)



One automotive firm will have to move 100 acres of equipment out of its plants before it can produce any civilian goods

dry moulding equipment, and even partially fabricated tank parts. In this group there were 1,518 machine tools with an estimated value of \$11,000,000; 1,200 metal dies costing \$2,500,000; 2,063 foundry items worth \$4,000,000; and 923 completed tank parts worth \$12,000,000."

Another company will have to move 100 acres of equipment, including huge presses, out of its plants to make room for reconversion. This is an area greater





Labor and Government share with Industry responsibility for unemployment

Britain Tries Planned Economy

By A. WYN WILLIAMS

SINCE the beginning of the Industrial Era, 150 years ago, mass unemployment has been a recurrent feature in all industrial countries. Great Britain, one of the first countries to become thoroughly industrialized, has long grappled with the problem. She had, even before World War I, a national unemployment insurance scheme for those who found themselves periodically out of work. The scheme was meant to be self-supporting but, after the first World War, unemployment became so extensive and persisted so long that the actuarial calculations on which it was based were upset.

Before 1920, unemployment at the depths of any depression had never exceeded ten per cent of the country's workers. After 1920 the average was never less than ten per cent and was at times as high as 25 per cent. The most prosperous year in the two decades between the two World Wars would, therefore, have been considered one of acute depression before 1920.

Facing these facts, Great Britain has become convinced that, after this war, she must approach the problem of keeping her workers employed in a new way. Dole, after unemployment has reached serious proportions, are only palliatives

BELIEVING that doles are only palliatives, the British Government proposes, for the future, to treat unemployment as preventable and deal with its causes

attacking the after-effects of a disease. They do not deal with its cause or prevent its spread.

The British Government proposes, for the future, to treat unemployment as a preventable evil and to deal with its causes at the source. It boldly states that it "accepts as one of its primary aims and responsibilities the maintenance of a high and stable level of employment after the war."

Plans are widely approved

THE plans for achieving full employment are not the creation of classroom theorists. Designed by the coalition government as a whole, they have been accepted by cabinet ministers representing Business as well as by those representing Labor.

Also, Parliament, which refused to implement the Social Security Plans of

the Socialist Beveridge, approved the Government's plans for Stable Employment unanimously.

The plans recognize that there are many forms of unemployment and that all cannot be cured the same way. They also recognize that unemployment is not the responsibility of capital alone—Labor and Government have their equal part in achieving full employment.

The white paper in which the Government outlines its plans recognized the part that collective bargaining—no less than trade combinations—plays in prolonging depressions. Natural forces are no longer free to reassert themselves and supply their own correctives when excesses have produced a depression. Today when collective bargaining freezes wages at a top level the scaling down of high labor costs is almost impossible. Similarly, the tendency toward

(Continued on page 97)

HELP WANTED



The veteran's plans for a new business may be sound but until taxes are lowered he will have a hard time obtaining capital

AMERICA'S greatest need when peace comes will be jobs.

Practically every postwar plan for assistance to returning soldiers is based on the idea that the men will want jobs and that jobs will be looking for men.

Many factors suggest that it will be comparatively easy to provide jobs:

1. There will be a pent-up demand for peace-time goods, probably the greatest in history.
2. The people will have buying power, the result of their war bond savings.
3. Ideas for new products will be available. War has stimulated scientific research and invention.
4. Millions of workers will be available, released from the services and war plants.

These factors set the stage for employment. They will not of themselves, however, automatically make jobs, will not prevent unemployment. One thing more is needed:

If we are to have jobs for everyone, there will have to be sufficient employers, men who hire the skill and services of others in the process of making a profit for themselves.

It is possible, of course—without employers—to create makeshift jobs: jobs selling apples on street corners; jobs raking leaves for WPA (or whatever its new name may be); and to make jobs by shortening the work week of the employed and compelling them to share the suffering of others less fortunate.

But, unless there are enough employ-

ers, there will not be enough economy-sustaining jobs to go around.

Unless we are willing to embark on state ownership or support of business, jobs can be created in only two ways, under our system of free economy (which we are now fighting to defend):

By establishing new enterprises.

By expanding existing enterprises.

Both methods require venture capital—money which the owner is willing to risk in competitive business.

New jobs require new capital

THE amount of capital required to create a job varies with the type of business. To start a small candy store, for instance, might not take much money. On the other hand, it is estimated that to create one job in a modern industrial plant requires \$5,000 for tools, building and equipment.

Such venture capital comes from two places: the individual with a surplus to invest, or the corporation which plows back part of its earnings into the business instead of distributing everything after taxes to the stockholders. Obviously, these corporate and individual investors need not be wealthy. They include everyone who lives within his means and saves money.

The problem of the man starting a new business or expanding an old one is to attract capital from different sources to finance his undertaking.

To attract venture capital, the prospective employer must be able to prove

that his business offers good opportunity for the investor to make money. If there is no incentive for venture capital to come out and go to work, it is likely to remain idle or be spent as income.

Herein lies America's danger after the war: Our present federal tax policy and high progressive rates on individual incomes have eliminated practically all incentive to venture capital.

In wartime, high taxes are to be expected—are, in fact, necessary.

In wartime, the Government needs tremendous purchasing power. Some of this purchasing power it can get by borrowing. As much of it as possible, however, must come from taxes. If the Government relied too heavily on borrowing, the subsequent mounting public debt (coupled with increasing buying power on the part of the people) would lead to a loss of confidence in the worth of our currency—and would result in runaway inflation.

But, unless taxes are lowered when peace comes, few new jobs can be created.

If our present tax system remains unchanged, it will be almost impossible for employers to start new businesses or expand old ones.

In the Twin Cities of Minneapolis and St. Paul, a representative group of industrialists, financiers and other business men has been studying this whole matter for more than a year. It presents its findings in a booklet called "The Twin Cities Plan—a Realistic Approach to the Problem of Federal Taxation." The Twin Cities group points out what would happen, under our present tax system, if an ex-service man should want to go into business for himself and hire others: He has business ability. He has a good idea for a product which he knows is practical, something almost every family can use, and which he believes will sell briskly in the postwar world.

The ex-service man plans to organize a corporation, build or rent a plant, buy

D for the Postwar Risk-takers

By ALLEN WAGNER

INDUSTRIAL capacity, purchasing power and pent-up demand for goods will not be enough to solve unemployment when peace comes, if taxes are out of line

machinery, employ workers—and get started on production and sales.

His first need, of course, is capital—money to start the business.

So he tries to induce his friends to invest part of their savings in his new business. He is earnest and sincere, a good salesman, and has believable figures to show that his company will make ten per cent on investment. Quite an undertaking for a new concern—to make ten per cent profit, but let's accept the figures.

However, if the ex-service man's friends and relatives believe his promises, they still cannot afford to invest their savings in his new business.

Why not?

Well, suppose the first friend he ap-

proaches earns between \$8,000 and \$10,000 in salary. That's the income bracket into which he falls under the federal tax law. So he must consider the normal and surtax rates effective in his bracket. The rate for him on any extra dollar he earns is 34 per cent.

If he were to invest \$1,000, and the company earned the promised ten per cent, that would be \$100. But the corporation would have to pay 40 per cent of that in normal and surtax corporation taxes (we're assuming the excess profits tax will be repealed). That leaves \$60.

The new corporation would be expected to re-invest some of its earnings in the business, say, in this case, about a third. Thirty per cent of the \$60 would

be \$18. That would leave the investor \$42 in dividends.

But he does not get to keep the \$42. The 34 per cent normal and surtax rate on his own individual income will take an additional \$14.28 out of his earnings, leaving \$27.72 as the return on the \$1,000 investment.

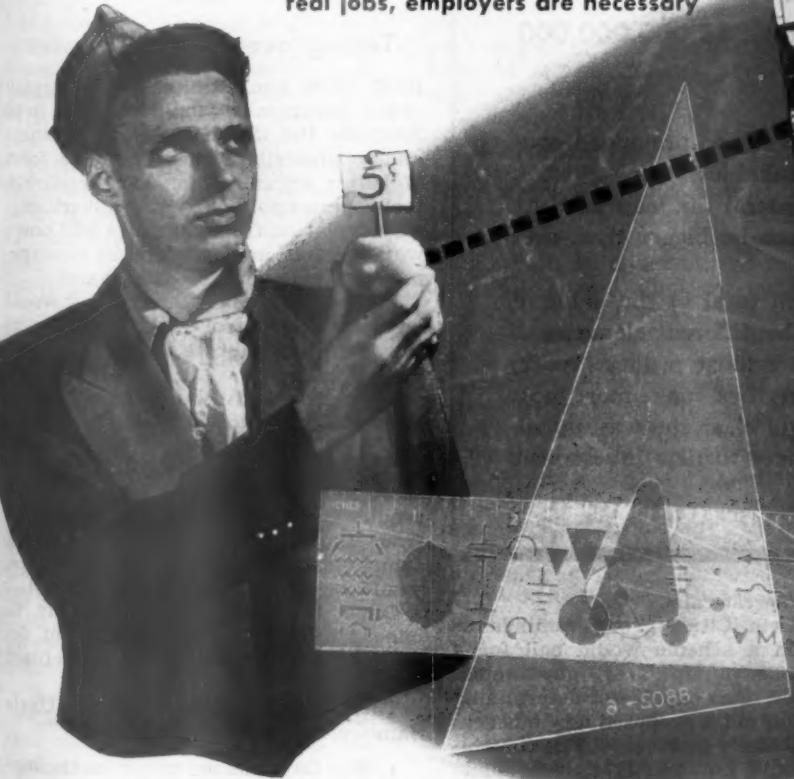
That is 2.8 per cent—less net return than he can get on seasoned securities where his entire capital is not risked in one spot.

So he won't invest in our veteran's corporation. Actually, he can't afford to invest in it.

Friend No. 2 happens to be fairly well off. His income is in the \$50,000-\$60,000 bracket. The best our veteran can offer this second friend, on a \$1,000 investment, is a net return of \$11.76, that is, 1.2 per cent.

But our ex-service man is not easily licked. He has a rich uncle—one he'd

Apple-selling jobs can be created without employers. But to create real jobs, employers are necessary



rather not tackle, it's true. But this is an emergency. Besides, Uncle Harry has plenty of money, and has always been willing to take a chance. His income is more than \$200,000 a year, counting his salary, rents, royalties and other receipts.

Uncle Harry should be more than willing to give a young fellow a start by investing heavily in his new corporation. But Uncle Harry's net return on \$1,000 invested in the new company would be, under our present tax system, only \$5.04—a trifle more than half of one per cent.

Why should he risk his money in a new company?

If he could have reasonable assurance of, say, a five per cent return, that would be another story.

Let's suppose for a moment that our veteran's two friends and his rich uncle would be willing to risk their savings in his new company if he could show them a net return of five per cent on their investment; how much would the cor-

earn $42\frac{1}{2}$ per cent. For Uncle Harry the corporation would have to earn 100 per cent on investment.

As bright, then, as are the veteran's prospects for making money in his proposed new business (his expected profit of ten per cent is much higher than most new enterprises would dare hope for) he will not be able to offer enough incentive to attract venture capital.

Without capital, he will not be able to launch the business and will not be able to create jobs for himself and others.

Financing by government?

BUT why depend on private investors?

Why not have the Government provide prospective employers with needed capital? Why would it not be a good idea for America to have a national lending agency—in competition with private banking—with branch offices in every section and with funds available

ence, training and judgment for such work are not numerous and are not interested in government jobs.

Even though the Government should be able to hire enough trained personnel to man all its branch offices, there would still be great danger that the loans would be handed out to the wrong persons.

Experienced business men, who invest their own money in new companies and who, therefore, are doubly careful, do not always pick winners. Could government employees be expected to have a higher batting average?

Assuming that politically important persons would not influence in any way loans to individuals, and assuming that strict honesty could be maintained in granting loans, the unsuccessful government-financed businesses would exceed the successful.

The failures would be visible in the form of vacant plants, stores and offices, and would be reported in the local papers. Public opinion—the opinion of the taxpayer footing the bill—would make itself felt and, sooner or later, the whole federal lending project would be liquidated. But it would leave a long financial headache in its wake.

It must be recognized, however, that if the Government once got into the business of financing private firms, the project might not be allowed to die a natural death.

Because each business failure would reflect on the judgment of the government employee who made the original loan, the tendency would be to send good money after bad—to resort to drastic stimulants in the form of additional loans. The failing business would be encouraged to linger on.

Taking over sick businesses

BUSINESS consultants in the employ of the Government would be called in to diagnose the ills of the sick business and to prescribe remedies in the form of better organization, work methods, tools, personnel, markets, advertising. Any deviation from the rules laid down would result in a change in management, unless approved beforehand.

If the sick business survived, it would be under the control of the Government to which it would owe its continued existence.

Of the successful businesses financed by Uncle Sam, most would remain relatively small. A few, however, would be born with great potentialities, and for these to expand, more capital would be required. These funds, too, would come from the Government—and then big companies, as well as small companies, would be under government control.

Other businesses, not originally financed by the Government, might demand public loans after being refused by the banks.

This is what would result, if Uncle Sam were to subsidize business:

1. The Government would be the big...
(Continued on page 70)

Why More Jobs Must Be Made

AFTER the postwar transition period when the country has re-established itself on a stabilized basis, the federal Government probably will be spending about \$20,000,000,000 a year. The budget, exclusive of social security, will look something like this:

Interest on the public debt, \$6,000,000,000.
National defense, \$6,000,000,000, perhaps more.
Veterans' aids, about \$3,000,000,000.
Other government expenditures, \$3,000,000,000 or more.

Presumably we shall balance this budget, for prolonged continuation of operations in the red is unthinkable.

If we are to carry a \$20,000,000,000 federal tax load without severe strain, national income will have to be bigger than ever before in peace time.

The national income is simply the sum total of the value of all the goods and services produced by the different elements of our economy. To increase this income we must produce more, which means that we must expand our activities, make more jobs.

Business will do this if Government will clear the way by removing tax obstacles and other hindrances to new investment and to expanded business activity.

poration have to earn? Here are the figures:

In the case of the first friend (whose income is between \$8,000 and \$10,000) the corporation would have to earn 18 per cent on investment.

In the case of the second friend (whose income is between \$50,000 and \$60,000) the corporation would have to

at low interest rates?

The Twin Cities group reminds us that such a scheme would call for a tremendous number of government employees, each capable of determining whether or not a proposed new business would be likely to succeed. The Government would not find it easy to build such a staff. Individuals with experi-

First-Aid Kit for Reconversion

By LAWRENCE SULLIVAN

IF YOU are a war contractor, here's a helpful outline of what you should do if and when cut-backs or cancellations of your war orders come

CANCELLATION of some \$15,000,000,000 in war contracts in the past year has introduced a new term in Washington's official lexicon—"cut-back jitters."

That's what a war contractor suffers when he reads of cancellations all about him, yet can find nobody to tell him where he stands—whether, for example, he should proceed full speed ahead to make those 2,000,000 shells, or anticipate a sharp cut-back next month.

"If the cancellation should come tomorrow... How and where does one apply for a T-loan?... On what basis are costs figured for the completed portion of the contract?... Who is responsible for severance pay?..."

These and a hundred similar questions haunt the war contractor as he presses on at maximum production. Like an aviator in a power dive, he knows the real test does not come until he begins to pull out.

In part, management's problems in termination arise from a division of responsibilities and authorities among the several contracting agencies.

When Vice President Wallace, to illustrate, journeyed to Bridgeport, Conn., late in August for a conference on cut-backs and reconversion, Gov. Raymond E. Baldwin and Mayor Jasper McLevy of Bridgeport asked him pointedly if Washington would give assurance that men and materials would be made available for a previously announced civilian resumption.

"I can't assure anything," Mr. Wallace replied. "In fact, I'll add that no man in Washington can assure anything, with the number of agencies set up there!"

But Congress has made a significant beginning toward simplifying and expediting the inevitable bureaucratic procedures involved in contract termination.

The principal termination procedures have been established by the Contract Settlement Act of 1944, approved July 1. This measure established the Office of Contract Settlement with broad power to "prescribe policies, principles, methods, procedures, and standards to govern the exercise of the authority and discretion and the performance of the duties and functions of all government agencies under this Act."

Uniform methods required

THIS means that each contracting agency shall terminate its own contracts. The legislation provides merely that all departments shall attempt to establish uniform methods and procedures. The Act authorizes the Director of Contract Settlement to require each contracting agency to conform to the general program.

But one section of the law also authorizes any contracting agency to issue "such further regulations not inconsistent with the general orders of the director as it deems necessary or desirable to carry out the provisions of this Act."

This means that each contracting agency will have its own routine in detail.

The latest government survey showed 105,000 open war contracts for \$50,000 or more, placed with 17,000 industrial corporations. These commitments totaled \$150,000,000,000. There are no statistics

Pitfalls to Avoid in Contract Termination



1 Don't fail to provide sufficient help in your termination unit



2 Don't fail to take inventory as promptly as you possibly can



3 Don't fail to obtain and review subcontractors' claims promptly



4 Don't fail to present your termination claims on proper forms



5 Don't fail to take this closing step: Submit a certified invoice or signed voucher after the settlement is approved

on how many of these contracts will run their course to completion, but best official estimates are that the end of the war in Europe will find at least 35,000 of these large prime production contracts to be terminated; and from these would flow about 150,000 subcontracts.

Obviously the amount of money involved will be much less than the original contracts.

In addition, about 100,000 smaller prime contracts are now in production. From these contracts flow perhaps 300,000 to 400,000 subcontracts.

The Office of Surplus War Property estimates that at least 70,000 firms now are engaged in some measure in direct war production, and that about half of them eventually will face termination procedures.

These adjustments will extend over a period of two years, with production being steadily cut back to meet the changing tempo of war.

As a further step toward standardizing procedures, the new law establishes a Contract Settlement Advisory Board presided over by the Director of Settlements, and including the Secretaries of War, Navy and Treasury, Chairman of the Maritime Commission, Administrator of the FEA, Chairmen of the RFC, WPB and SWPC, and the Attorney General.

In defining the general policies to gov-

ern termination negotiations, the law says:

shall be based on the same principles as compensation for the termination of prime contracts."

The law provides specifically for several different bases of determining costs, that is, costs may be determined on the basis of "actual, standard, average or estimated" outlay.

Settlements may be made by agreement or by a determination on the part of the government contracting agency, when no agreement has been reached. All termination settlements continue subject to the Renegotiation Act.

Settlements may be reviewed

WHEN the government agency makes an arbitrary settlement without agreement, the termination settlement still is subject to the Renegotiation Act; but the Settlement Act provides special appeal procedures through the Court of Claims or the U. S. District Court.

All settlements exceeding \$50,000, are subject to review by a special Review Board of the contracting agency. Failure of this Board to act within 30 days automatically signifies approval of the settlement.

The bill likewise provides specifically that contractors shall be reimbursed for all reasonable accounting, legal and clerical services incident to termination, and for all costs of removing, preserv-

ing, storing and disposing of inventories.

The law also directs that the settlement shall include allowance "for profit

on the preparations made and work done for the terminated portion of the war contract," and for interest on the contractors' funds tied up in the partial performance.

Finally, the law provides that all contractors having termination claims against the Government may apply for interim financing pending final settlement, and that such financial support

shall be provided "within 30 days after proper application."

The first general regulation formulated by Robert H. Hinckley, Director of Contract Settlement, was issued August 24, to cover termination loans (T-loans) made by commercial banks and guaranteed by the Federal Reserve system. These loans are available to subcontractors as well.

"T-loans enable any war contractor to convert into cash at his local bank approximately 90 per cent of the sound value of his war assets frozen by contract termination. A Federal Reserve Bank guaranteee, in turn protects the lending bank. The Federal Reserve Banks may pass on T-loans up to \$500,000." Larger T-loans must be approved in Washington.

The regulation provides that neither the Federal Reserve Bank nor the contracting agency may question the estimate of his inventory given by the contractor "unless there is reason to believe it is substantially overstated."

The guiding policy of the new statute is to assure both prime contractors and subcontractors, small and large, "speedy and equitable final settlement of claims under terminated war contracts, and adequate interim financing until such final settlement."

The War Department, Navy Department or Maritime Commission may



Business men as well as government officers have been trained at special schools in termination routines. These include accountants, auditors, lawyers, engineers and negotiators

ern termination negotiations, the law says:

"It is the policy of the Government, and shall be the responsibility of the contracting agencies and the director, to provide war contractors with speedy and fair compensation for the termination of any war contracts, in accordance with and subject to the provisions of this Act, giving priority to contractors whose facilities are privately owned or privately operated. Such fair compensation for the termination of subcontracts

guarantee termination loans, or T-loans, but no one department may refuse approval of a loan covering a preponderant share of the contractor's war business merely because of difficulties over some other contract with another procurement agency. Stated another way, no department may withhold a major loan as a club forcing agreement on another federal department's contract.

Banks are to be encouraged to handle as much interim financing as possible on a non-guaranteed basis; but a contrac-

SOMETHING NEW IN WAR MADE OF RUBBER



Today, on every invasion ship go rubber scale models of the beachhead. Every man now knows the battle ground before the battle starts.

You're looking at a beachhead. There's the blue sea...the buff-colored beach...the barrier reef...the emerald palms. An officer is pointing out gun emplacements, air fields, roads...even rocks...and you study them well, for your life may depend upon your knowledge of every foot of enemy ground.

Yet strangely enough, it isn't actual land you're looking at. It's a model, an amazing three-dimensional map of the invasion coast—tinted, detail-perfect, made of rubber!

The Navy knew that countless lives could be

saved if every man in every invasion force could have the advantages of studying these models. It meant models by the hundreds. But knowing how United States Rubber Company welcomes any job that helps save our fighting men, they came to our rubber experts.

Rubber beachheads were new to us. However, rubber beach wear—colored bathing caps, suits and shoes—was not. Out of the vast reservoir of skill and science gained in making these products, the way was worked out to make rubber beachheads quickly, accurately, in quantity. The result? Something new in war; thousands of models, accurate, unbreakable, waterproof...and so light they can actually be flown to our forces.

SEABORNE FORCES SPOT LANDMARKS

they've already seen in detail on the rubber map ...



AIRBORNE FORCES RECOGNIZE TERRAIN,

already familiar from study of the rubber map ...



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Familiarity with enemy territory means minimum losses!



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tor's acceptance of a non-guaranteed loan in one instance may not prejudice his right to a guaranteed loan later, "even if the proceeds of the T-loan are used to retire the existing loan."

The Director of Contract Settlement urges all federal Government contracting agencies to delegate to the Federal Reserve Banks such authority as may be necessary to insure "prompt processing of applications."

Another mandate of law exempts federal officials from *personal* liability on contract settlements, save where fraud is shown.

This provision removes an ancient source of bureaucratic delay and indecision—the fear that the General Accounting Office may disallow any businesslike settlement which would then be charged against the personal account of the final review officer in the procurement agency.

On this point the language of the law is beyond misunderstanding: "No officer or other government agent authorizing or approving such payment or settlement, or certifying the voucher for such payment, or making the payment in accordance with a duly certified voucher, shall be personally liable for such payment, in the absence of fraud on his part."

Review authority is limited

ANOTHER section provides categorically that the General Accounting Office, in auditing the books of any disbursing officer under war contract settlements, "shall allow any such disbursements made by him, notwithstanding any other provisions of law."

The review authority of the General Accounting Office thus is limited specifically to examining the transactions after the *final* settlement; and only recovery actions based on fraud may lie after the final settlement, all such actions to be initiated by the Department of Justice on the basis of General Accounting's finding or report.

That contractors may be relieved quickly of excess war inventories following terminations, WPB has ordered a sharp revision of its stockpiling program in the basic raw materials. Henceforth, a three-months' total supply is to be regarded as a maximum stock-pile, save in imported items, where a six-months' supply may be held. Purchase programs in raw materials will be curtailed, to make ready for the absorption of working inventories from the principal war plants. To this extent, WPB has made at least a beginning toward bringing the nation's raw materials reserves down toward normal peacetime working levels.

To insure adequate and proper storage space for ex-

cess materials and tools following termination settlements, Surplus War Property Administrator W. L. Clayton has established a special Space Control Committee in Washington, to maintain a weekly check-list of available space in each of the War Department's nine service command areas.

The first report of this committee showed about 21,000,000 square feet of satisfactory storage space available as of August 1, of which only about 25 per cent then had been requisitioned by the procurement agencies.

Quick access to storage space often is a key factor in speedy terminations, because the real work of reconversion can start, in many plants, only when the special war paraphernalia has been cleared from the shops. To this extent, storage space control and contract settlement are essentially parts of the same problem. Either one, without the other, easily could leave the contractor hanging precariously by his financial fingernails.

Measured both in dollar volume and number of contracts, the Army will handle the vast bulk of terminations. Corporations holding army production contracts will find the new *Contractors Guide* an indispensable aid in preparing for T-day. It is available through all War Department contracting officers, catalogued as War Department Pamphlet No. 34-2.

In the Army alone, termination settlements will be delegated to nine service commands: the Air Forces, Service Forces, Chemical Warfare Service, Corps of Engineers, Medical Department, Ordnance Department, Quartermaster Corps, Signal Corps and Transportation Corps.

In each branch, the Army *Contractors Guide* warns, there are five principal pitfalls to prompt termination. For speedy settlement you must avoid these obstacles:

1. Failure to provide sufficient help in the termination unit.
2. Failure to take inventory promptly.
3. Failure to obtain and review subcontractors' claims promptly.
4. Failure to present termination claim properly on standard forms.
5. Failure to submit certified invoice or signed voucher after settlement is approved.

The need for using proper forms for presenting claims and for disposing of termination inventories is stressed as is the need for subcontractors, notified of termination, to get in touch promptly with the agency which let the contract and ask for all pertinent instructions. Official forms are now being revised and new, practical blanks are expected to be available soon.

Expenses charged to termination

THE War Department's Guide specifies 12 major categories of contract expense as properly chargeable in the termination settlement. They are:

Cost of inventory, subcontractors' claim, depreciation, experimental and research expense, engineering development and special tooling, loss on facilities, special leases, advertising, interest on borrowed funds, settlement expenses, protection and distribution of property, and all initial costs.

But there are five categories of outlay which never may be incorporated in termination accounts:

Losses on other contracts, expenses of conversion to other uses, expense due to negligence, costs exceeding those required by the contract, and (for the present, at least) all special costs already allowed in renegotiation settlements.

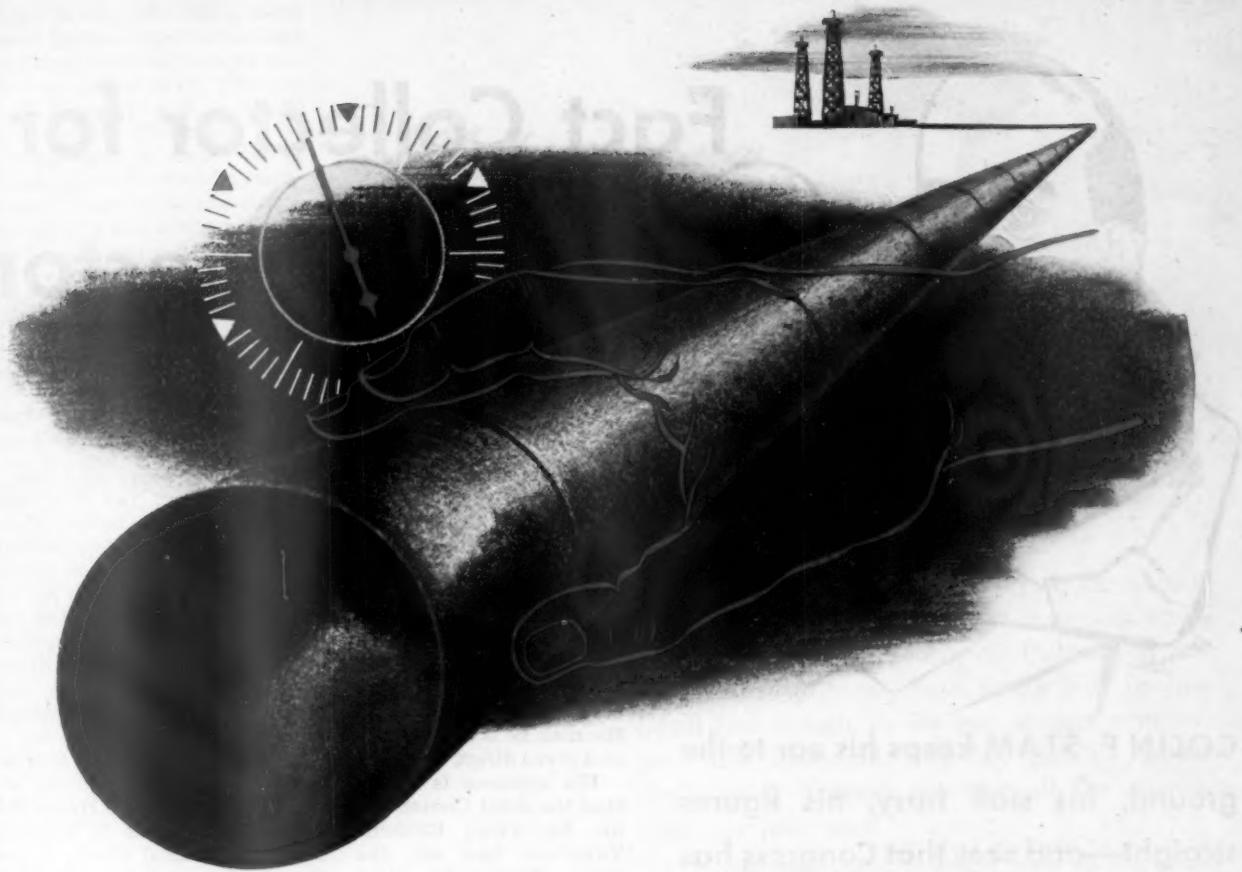
Two other basic federal documents make up the desk kit of the Termination Officer in any firm holding army contracts. They are *Procurement Regulation 15*, listing the general terms and policies governing military purchases, and *Termination Accounting Manual (TM-14-1005)*. These documents may be obtained for a nominal fee from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Those requiring a copy of the *Contract Settlement Act of 1944* may obtain one free from their Senator or Representative. Ask for Public Law 395, 78th Congress, 2nd Session.

In preparation for T-day the Army has been conducting special training courses in settlement procedures since June. These schools, usually held on a university campus, are open to business men as well as government officers. Through them the

(Continued on page 92)



"I won't be needing Thursday afternoon off, Mr. Meags. My grandmother's funeral has been rescheduled as part of a Sunday double header!"



Keeping a finger on A PIPE LINE'S PULSE

Operating a pipe line involves much more than pumping oil into one end and pumping it out at the other. For example, in the new refined products pipe line extending from Texas to the eastern seaboard, many different petroleum products may be moving "end-to-end" through the same pipe.

Obviously, station operators have to follow the flow of each "shipment" very closely. Any trouble in equipment must be detected immediately, and corrective measures promptly taken.

Because of experience on similar lines, Westinghouse engineers were called upon to assist the pipe line engineers in designing a complete control system for all twenty-nine stations. Result—compact desks

which give each operator a complete picture of the piping and equipment layout of the station. A hot bearing, excessively high or low line pressure, or one of many other dangerous conditions causes a warning bell to ring—and a light to flash on the control desk—definitely locating the exact seat of trouble. In many cases the faulty equipment is taken out of service automatically.

So unfailing and dependable is the control that operators call it the "pipe line nurse".

This is a typical example of Westinghouse Engineering Service for a specific industry. It's a service that's equally well equipped to solve any power problem for your industry. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

HOW **W.E.S.*** CAN
HELP YOU PLAN . . .

A nationwide corps of Westinghouse engineers offers you broad electrical and production experience gained through years of working with your industry.

These men can give you valuable assistance on *product development, rehabilitation of existing equipment, maintenance, material substitution*.

Put this service to work on your present problems . . . let these men work with your engineers in planning for reconversion to postwar needs. **J-91046**



Westinghouse
PLANTS IN 25 CITIES OFFICES EVERYWHERE

* WESTINGHOUSE ENGINEERING SERVICE FOR INDUSTRY



COLIN F. STAM keeps his ear to the ground, his staff busy, his figures straight—and sees that Congress has information for proper tax laws

THE Chief of Staff of the Joint Committee on Internal Revenue Taxation is Colin F. Stam. He is five feet, eight inches tall, dark, plump, and with a bent toward baldness. He has good bony structure in his jaw. His nose is an excellent piece of work, being neither aquiline nor pug nor Roman but strong and straight on a wide base. It is the kind of nose one sometimes sees in portraits of the old-fashioned Dutchmen—not Germans, but Dutch—who sailed and fought and wore wide-bottomed pants and colonized and built up strong businesses and were firm. Peter Stuyvesant was one of them. Some of the old Governor's kin moved from the little town of New Amsterdam to the Eastern Shore of Maryland and some of them are still there.

Mr. Stam has a right to that kind of a nose. The Stams came from Holland in 1761, and settled on the Eastern Shore. Men from that delightful part of the country take naturally to shooting and fishing and other outdoor sports. Chief of Staff Stam has neglected them. He has been too busy. He reaches his desk at 9:15 in the morning and often stays until midnight. The desk is covered with reference books, papers and letters and he can put his hand precisely on any one of them. He can be reached by telephone at any time, unless he is in a conference.

He actually likes to have those interested come in and ask questions about

Fact Collector for Tax Collectors

By HERBERT COREY

tax matters. Sometimes they leave a good idea behind. The Colin in his name—pronounced Collin—is Scotch and inherited. His voice is rather low, he appears to be diffident but is not, he has a way of twiddling his eyeglasses on their cord. He looks directly at the man he is addressing, and gives direct answers.

His business is to see that the Joint Committee on Internal Revenue Taxation has all the facts affecting the most complex, widespread, deep-diving and potentially dangerous of the postwar problems with

which Congress must deal.

That is not exaggerating the significance of the taxation question. Other more colorful, sensational, emotional, matters—military, political, security, geographical, humanitarian, judiciary—will be presented for solution, but they all trace back to taxes. Every one would die on the vine unless watered with money. Every dollar the United States is spending or will spend comes from taxes. Stop the dollar and every activity stops with it. The wrong kind of a tax will throttle business, industry and agriculture. National progress and decay are linked to taxes. The history of the world proves it.

There are various kinds of taxes, of course.

In normal times the Joint Committee—hereafter to be referred to by that abbreviation—deals with internal revenue only. In broad terms the Budget works out a schedule of wants. It decides, more or less roughly, how much money the many governmental operations should get. The Treasury, still more or less roughly, balances this Budget total against the probable revenues, decides whether the Government must have more money or can get along with less, and fixes up a plan for getting more taxes which it hopes the Joint Committee will accept.

In normal times the Joint Committee has ten members, five Senators and five Representatives, of whom six are from

the majority party and four from the minority party. The five Senators are all members of the Senate Finance Committee and the Representatives are members of the House Committee on Ways and Means. These are the money-getting committees of the two bodies. Only after they have authorized the getting of money can the other committees spend it. Under the Constitution, all legislation affecting national finances must originate in the House.

When the Ways and Means Committee has agreed on the draft of a money-getting measure, the House debates and sometimes amends it. When the House accepts the final draft, it goes to the Senate, where it is referred to the Finance Committee for debate and possible amendment. If a conference committee is necessary it would probably be selected from the Ways and Means and Finance bodies.

Inasmuch as the House and Senate committees are practically identical through their representation on the Joint Committee, the enormous importance of the Joint Committee is immediately apparent.

A political balance

BECAUSE these are not ordinary times, the Joint Committee has been enlarged by the addition of one Senator and one Representative. The 12 members are not only evenly balanced politically, but are rated as among the most responsible men in the two Houses. No dissent is expected to that statement. Not only is there no balance of power but there is no evidence of partisan feeling in the Joint Committee. Members may and do differ but not along political lines. It is unlikely that any law can be produced which all taxpayers will accept with cheers, but it is certain that, when it comes out of the mill, it will be the best the Joint Committee can produce.

The two heads of the Joint Committee are Sen. Walter F. George of Georgia and Rep. Robert L. Doughton of North Carolina. They do not precisely share the chairman's seat but, by an informal arrangement, the chair is alternated annually—or thereabouts—between the Senate and the House members. At present Mr. Doughton is chairman and, by the same informal arrangement,

Senator George is vice chairman. Both names are well known to all interested in national affairs. Senator George was born in 1878, was elected to fill a Senate vacancy in 1922, and has been in the Senate ever since. Mr. Doughton is 80 years old. He has been in some kind of office since 1903, is a farmer and a banker, came to the House with the Sixty-Second Congress and has been in it ever since. Both men are regarded as hard-headed, conservative and courageous. Both are Democrats but in the Joint Committee they put the public interest first.

The other members of the Joint Committee are:

Sen. David I. Walsh, Mass.; Sen. Alben W. Barkley, Ky.; Sen. Robert M. LaFollette, Wis.; Sen. Arthur H. Vandenberg, Mich.; Sen. Robert A. Taft, Ohio; Rep. Wesley E. Disney, Kan.; Rep. Harold Knutson, Minn.; Rep. Jere Cooper, Tenn.; Rep. Allen Treadway, Mass.; and Rep. Dan A. Reed, N. Y. Senator Taft and Representative Reed were added to the original ten of the Joint Committee for the consideration of matters of postwar taxation.

The Committee has a two-roomed, air-conditioned office in the new House Office building, one room being used as a working place by the staff. The other has a desk for Chief of Staff Stam and a long director's table for the committee. It is distinctly a place of business. The staff members are buried in statistics and documents and reports. They do not chatter. Those who wish to do so smoke pipes. Their business is to get facts, make sure they are facts, and present them without bias. There are 14 staff members, each an expert in his line, and it is doubtful if anyone knows the political complexion of more than two of them.

Pioneer technical staff

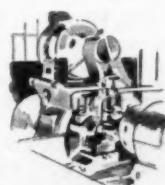
IT SHOULD be noted that the Joint Committee's staff is perhaps the pioneer in the movement for the creation of technical staffs which is gaining favor in both Houses of Congress. No man outside an airplane factory is busier than the congressman who works at his job. He is never through. If he does not work, his constituents liquidate him. It is impossible for the most ardent to inform himself on the intricacies of any major question, and still do all the other chores he must do. The necessity for a competent staff to collect and summarize the multitude of facts which must be considered before an even moderately satisfactory tax law is written was recognized years ago. The first move toward doing anything about it is to be found in the Revenue Act of 1926 which directed the Joint Committee to:

"Report on the simplification of the income tax law, its operation and administration, make such other investigations as the Joint Committee might think advisable, to review refunds and certain taxes, and to publish its reports from time to time."

The Joint Committee of 1926 prob-

*Make sure now
you will have*

Cash to Shift Quickly to Peacetime Operation



Finance Equipment New or Used Under this Plan

All your purchases of machinery and equipment...new or used...from manufacturers or the Government can be financed through Commercial Credit at low cost and with payments spread over a period of years. Details on request.

DON'T BE left behind in the race for civilian markets...and don't let your present working capital position fool you. Unless you are certain that your wartime assets will become liquid fast enough to let you change over for peacetime operation with all possible speed, don't wait. Arrange now for all the outside cash you may need.

Commercial Credit is ready now to set aside thousands or millions of its funds for your future use...under a simple, flexible plan which involves no interference with your management...places no restrictions on your operations.

This service lets you carry forward your reconversion program with a known supply of cash...ready to use when you need it. It eliminates the possibility that any delay in turning your wartime assets into cash would let competition get the jump on you.

Through Commercial Credit you can be sure of cash to rehabilitate and modernize your plant...to buy machinery and equipment...to build up inventories...to make tax or renegotiation payments...to meet all expenses of the transition period. Wire, write or telephone and we will send you full information.

Commercial Credit Company

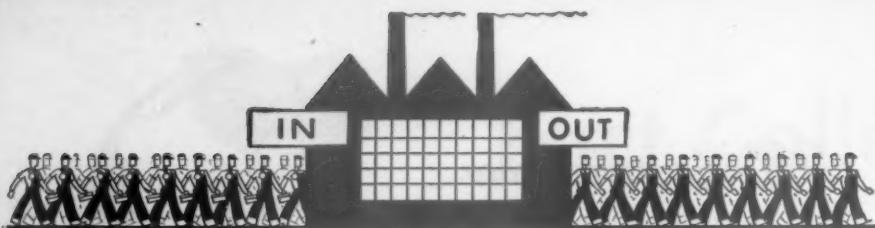
BALTIMORE 2, MARYLAND

Commercial Financing Divisions:

Baltimore • New York • Chicago • Los Angeles • San Francisco • Portland, Ore.

Capital and Surplus More Than \$65,000,000

INSTALLMENT FINANCING OFFICES IN PRINCIPAL CITIES OF UNITED STATES AND CANADA



High labor turnover is a NEEDLESS waste!

HOW can you decrease the loss of plant output, the wasted employee training and development, and the stepped-up manufacturing and operating costs that result from abnormal labor turnover?

Every phase of sound personnel administration is involved in the answer to this needless toll on business and workers alike. But primarily the task must be one of *understanding men and analyzing jobs* to the end that the two will be perfectly matched.

To help you accomplish this need, we have prepared an 88-page study based on our wide experience in working with leading executives on today's problems of personnel administration, and the record control routines so vital to success.



This book describes many systems in complete detail. It shows job specification, employee history, the job evaluation status with merit rating and many other records. These are the *fact-sources* providing the necessary basis for fair, intelligent promotions that lead to improved morale, higher production and more stable employment.

"Personnel Administration" is available free to executives. Ask our nearest Branch Office to send you this valuable study.

Get this free 88-page book on PERSONNEL ADMINISTRATION . . . full of practical ideas on
EFFECTIVE MANAGEMENT
IDEAL OPERATING PROCEDURE
APPLICATION PROCEDURES
EMPLOYEE HISTORIES
JOB SPECIFICATION
JOB EVALUATION
MERIT RATING DATA
TERMINATION PROCEDURES
PAYROLL ROUTINES
IDENTIFICATION PRACTICES
AND OTHERS



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SYSTEMS DIVISION
REMINGTON RAND
Buffalo 5, New York



ably charged its problems sabers in hand and also probably got off its horses a little later and sat down to think. It knew some of the laws under which previous committees had operated and which would control its actions, but it did not know all of them. Nor did anyone else. It discovered that some statutes had been forgotten. Some statutes contradicted other statutes. The first business inaugurated by the Joint Committee was to codify the laws affecting its business.

Revenue laws are codified

THAT codification was completed in 1939 and enacted into law. Congress has had its laws codified, but has never put the statutory stamp on the codification. The general guess is that no one is quite certain that the codification is complete or correct and it is possible that no one will ever take the trouble to find out. The Joint Committee's codification remains as the only statutory code to be found in the whole edifice of government.

It is a book about the size of a collegiate dictionary and is the only guide by which mistakes, duplications and errors can be detected and avoided. Chief Stam is openly proud of it. He had a good deal to do with its making.

Like many other men—perhaps most other men—Colin Stam made program by a sort of lateral movement. In 1927 he needed a job. His father was a druggist on the Eastern Shore and his mother was the daughter of an Episcopal clergyman. These facts are cited as evidence that money did not precisely run in the Stam family at that time. He had volunteered for the Navy in the First War, was found to be officer material, sent to Hampton Roads for a study course, and was ready for his commission about the time the war ended. He became a student at Washington College in Chestertown, Md. His middle name is Ferguson, for the first president of the little college.

It's a pity there is no space in which to talk about Washington College. It is on the accredited list, it has some fine old buildings on a broad campus in Chestertown, which is a lovely little city, it is the only college which ever conferred a degree on General George Washington—Doctor of Laws—it has a distinguished list of graduates, and the opportunities for a self-supporting student to earn money in its vicinity are possibly pretty meager.

But the young fellow wanted to be a lawyer, and kept at his studies until he needed that job rather violently in 1927.

Congress had named a special committee to investigate the operations of the laws governing the collection of internal revenues and the administration of the Bureau of Internal Revenue. The job proved to be on the investigating end. The revenue laws, now codified, go back to 1872, but at the time they were in a muddle. Colin Stam aided in the untangling and in the first work of codification. The need for a permanent staff

Electrical Weapons by the Maker of Bell Telephones

No. 2 of a series: for the Navy



One battleship needs as many telephones as a city of 10,000

When U. S. warships go into action, telephone equipment transmits orders instantly, clearly.

For the huge battleship "Wisconsin," Western Electric supplied two separate telephone systems using equipment designed by Bell Telephone Laboratories.

1. *Sound powered telephone system*—with 2200 instruments connecting all battle stations. These battle

phones operate on current generated by the speaker's voice, so damage to the ship's electrical power supply cannot interrupt communications.

2. *Battle announcing system*—with 20 transmitter stations and over 300 loudspeakers which broadcast orders in a giant voice.

All this for just one battleship! Aircraft carriers, cruisers, destroy-

ers, submarines, merchant ships too must have telephone equipment.

Today Western Electric—peacetime maker of telephones, switchboards and cable for the Bell System—is the nation's largest producer of electronic and communications equipment to aid our armed forces at sea, on land and in the air.

To speed Victory, buy War Bonds regularly—and hold on to them!



We have outgrown
our name

ACME PATTERN & TOOL CO.
INCORPORATED

ACME
Aluminum Alloys
INC.



BECAUSE the name Acme Pattern & Tool Company, Inc. no longer adequately describes the scope of our operations, we are changing our corporate name to Acme Aluminum Alloys, Inc.

This marks the second time we have changed our name to keep pace with the remarkable growth which this company has made since its beginning less than 25 years ago.

Our production of aluminum alloy castings . . . permanent mold and sand . . . has grown to such volume, that in floor space, equipment and output the Acme foundry today ranks among the first four or five aluminum foundries in the United States.

Our pattern, tool and die departments, and our design and engineering service, continue unchanged, but will operate as the Acme Pattern & Tool Division of Acme Aluminum Alloys, Inc.

We shall be glad to submit recommendations and estimates on your current or future aluminum castings requirements.

ACME Aluminum Alloys, Inc.
DAYTON 3, OHIO
HEAT-TREATED ALUMINUM ALLOY CASTINGS

ACME PATTERN & TOOL DIVISION
PATTERNS • TOOLS • TOOL DESIGNING
PRODUCTION PROCESSING



FOR VICTORY
BUY
WAR BONDS
AND STAMPS

that the Joint Committee might keep abreast of the situation became apparent. It has nothing to do with the shaping of policies.

It discovers, correlates and reports on facts.

Under the heading "The Treasury" in the *Congressional Directory* is this paragraph:

"The Division of Tax Research analyzes taxes and tax systems and prepares studies on the economic aspects of tax matters for the use of the Secretary and other Treasury officials—and, upon request, for the Congressional Joint Committee on Internal Revenue Taxation It is responsible for the assembly and publication of all statistical information pertaining to federal taxation—and exercises general supervision over the work of the Statistical Section of the Income Tax Unit of the Bureau of Internal Revenue."

But the staff of the Joint Committee gives the facts and studies prepared by the Treasury precisely the same treatment it gives to similarly authoritative statements from other sources. The Treasury may urge a tax policy on Congress. The Joint Committee may accept the Treasury policy or frame a policy of its own for submission to Congress. The Committee's staff gathers the facts. Because it is able to deal with specific cases, such as the requests for promiscuous refunds which are made to the Bureau of Internal Revenue, it can say that:

"In the case of XYB it appears that a definite harm was done to this industry," or

"In the case of XYL this industry seems to have escaped its fair share of the common burden."

Many tax facts are studied

THE results on commerce of certain taxes imposed by other countries are studied. The cost of collecting a given tax may be considered. The relation between states and cities and the federal Government may be reported on if the Committee desires that knowledge. Each man and woman of the staff was selected because he or she was efficient in finding tax facts.

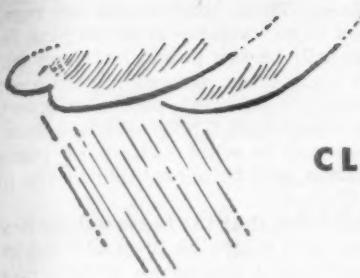
The staff does not watch the clock because the work does not permit this vagary. If the Joint Committee asks for certain information, it gets that information as rapidly as it can be obtained and assembled. When Congress is in session, the work is continuous, within human limits. Between the sessions the work is merely not quite so pressing. Vacations are taken, not with reference to the fishing season, but when the staff member has been working so hard that he is growing stale.

That is the rule Colin Stam follows.

In considering the problem of post-war taxation, the technical staffs of the Treasury and the Joint Committee are working in complete harmony.

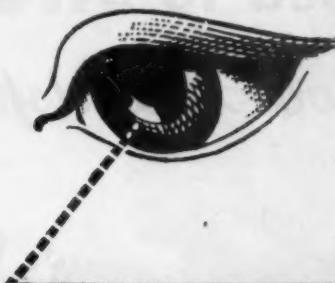
"There is no question of policy."

There are conferences with business men, bankers, manufacturers and



CLOSED TO THE WEATHER... BUT

wide open to the eye



This attractive drugstore front typifies modern thinking in storefront design. Its open, display effect, can well be applied to any kind of store. No matter what you want to sell, you can profit from the Visual Front's ability to attract business.



THAT'S THE PRINCIPLE OF THE

VISUAL FRONT

Throwing your whole storefront wide open, so the whole interior of the business place is on display, is a sure-fire way to increase store traffic—and sales.

With a Visual Front of glass, you can remove the visual barrier between your store and the passing traffic. The decorative motif and display can be carried *through* the glass front, further serving to eliminate any feeling of a barrier. The huge display effect, made possible by the clear glass front, invites

interest and makes your store look easy to enter. Even when your store is closed, its attractive interior and merchandise can be displayed effectively.

Include the sales-building features of the Visual Front in your postwar designs. Talk with your storefront designer about it, and for information on the right types of glass to use, see your Libbey-Owens-Ford Distributor. Libbey-Owens-Ford Glass Company, 73104 Nicholas Building, Toledo 3, Ohio.

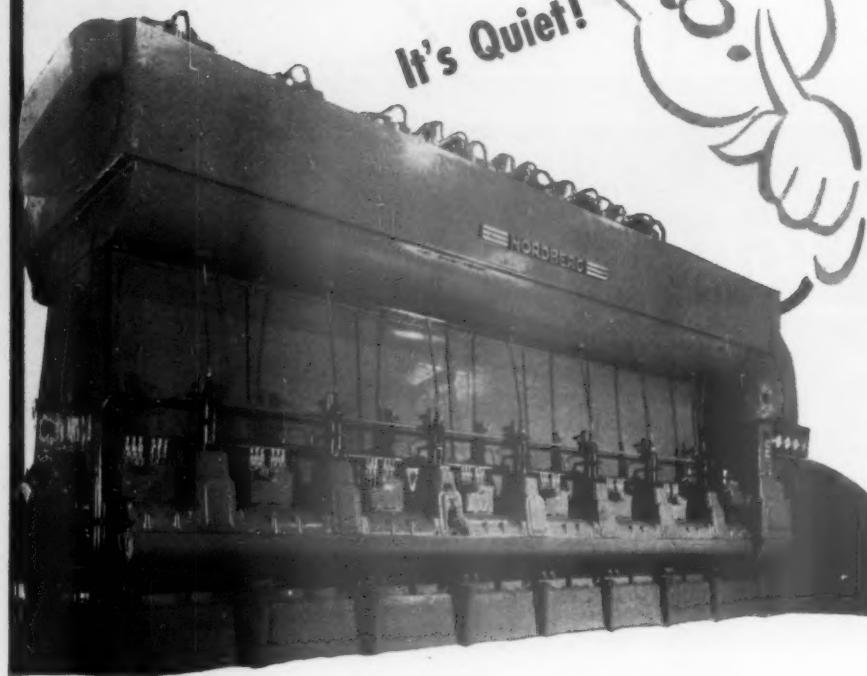


LIBBEY - OWENS - FORD
a Great Name in GLASS

This big Diesel engine used to SHOUT...

now it whispers

It's Quiet!



Everyone knows the deafening noise of an automobile with a broken muffler. Multiply this disturbance several hundred times and you have some idea of the unmuffled exhaust noise of this big Diesel engine.

The loud exhaust of a Diesel engine can be prevented with a Burgess Exhaust Snubber. But instead of muffling the noise, the Burgess Exhaust Snubber "snubs" the fast-moving slugs of exhaust gas and dissipates their energy so that they emerge from the Snubber into the air in a quiet, steady flow.

Burgess Snubbers can be safely recommended in critical locations where a noisy Diesel power plant cannot be tolerated, such as in hospitals, hotels, office buildings, and in residential areas.

THE SNUBBING PRINCIPLE



The chambers in the Snubber act like a series of thin blankets through which a golf ball is driven, and gradually slow down the fast-moving exhaust slugs so they leave the tail pipe in a smooth, quiet flow.

If you want quiet Diesel operation—be sure your Diesels are Burgess Snubber-equipped. Burgess-Manning Company, Chicago, Ill.

TYPICAL APPLICATION



The Wertz Pressure Maintenance Plant of the Sinclair Wyoming Oil Company depends on Diesel engines for power—Burgess Snubbers for quiet exhaust.

BURGESS DIESEL EXHAUST SNUBBERS

farmers. These conferences are regarded as more valuable in developing facts than will be the public hearings which will come later, although these are important in bringing points of view before the public. The problem before all concerned is what system of postwar taxation will be acceptable to the public.

All know that the taxes will be heavy. Some that might be proposed might be disastrous. A tax on an income merely because it is large might hit hardest the little man with the small income. The problem is more intricate than any game ever invented by the Chinese.

On Colin Stam's desk for ready reference is a book written years ago by Andrew Carnegie, entitled "Triumphant Democracy." Carnegie was proud of the men who in his day paid 50 cents tax on the income dollar and called them "partners with their Government." They are still partners and some of them are paying 92 per cent. Stam finds enjoyment in reading that book in his moments of leisure which are few. He thinks perhaps the reason he has never married is that he never had time to court a girl:

"And what woman would want a husband who is never at home?"

Age? "Somewhere in the upper forties."

That was practically a blinding revelation in response to the request that he talk about himself.

Local Recreation

LOCAL initiative found the way to establish a permanent recreational center in Burlington, N. C., without calling for help or dictation by politics, either national or state.

Recreational facilities, particularly for the teen-agers, were inadequate. Local Chamber of Commerce leaders called a meeting to take care of this. It was decided to establish a non-profit organization to finance and supervise the permanent activities and to provide a suitable building when construction is permitted. Officers were named to proceed with necessary arrangements.

While this representative group of business men was present commitments for the project were made to the extent of \$100,000. Within the next few days the total was raised to \$213,000. Continuing subscriptions are expected to tip the total over the half-million mark by the year's end.

A centrally located site for the recreational center has been bought. Building plans will be drawn later. However, it is generally agreed that the center shall have a large swimming pool and that supervision of the project shall not become dependent on political control. An experienced staff will be employed to conduct the activities.

Local communities are increasingly accepting their local responsibilities and the men of Burlington feel that pride of possession and independence of ownership are well worth their price.

PACKING THE PUNCH... to the China Sea



Tarawa . . . Kwajalein . . . Biak . . . Saipan . . . Guam—the roll call is long of the island strongholds that have reeled under the powerful punches of American naval task forces, driving relentlessly toward the Philippines, the China Sea, the Asiatic mainland and Japan.

This crushing naval power ranges far because it takes its bases with it . . . a triumphant achievement of farsighted planning, building, equipping and supplying.

A traveling base is made up of fleets of supply ships, cargo ships, tankers, ammunition ships, transports, hospital ships, repair ships and other auxiliary craft in support of the fighting fleet. Traveling bases make modern task forces self-contained, fit for weeks of action in vast stretches of sea without turning back to friendly ports.

Maintaining this huge, complicated naval organization involves statistical, figuring and accounting work that never ends. Burroughs machines help here, as in hundreds of other wartime operations, performing important calculations, producing vital records.

BURROUGHS ADDING MACHINE COMPANY • DETROIT 32

Burroughs

FIGURING, ACCOUNTING AND STATISTICAL MACHINES

• NATIONWIDE MAINTENANCE SERVICE

• BUSINESS MACHINE SUPPLIES

NORDEN BOMBSIGHTS—Years of experience in precision manufacturing are enabling Burroughs to render an extremely important service to the nation by producing and delivering the famous Norden bombsight—one of the most precise instruments used in modern warfare.

★ ★ ★

FIGURING AND ACCOUNTING MACHINES are also being produced by Burroughs for the Army, Navy, U. S. Government, Lend-Lease and those business enterprises whose requirements are approved by the War Production Board.



Back the Bunch Who Pack the Punch!
BUY ANOTHER WAR BOND TODAY!

Coming Battle of the Home Fuels

By ART BROWN

POSTWAR will see a hot fight on the fuel front.

In the residential field, hard and soft coal, oil, gas and electricity are competitors. Each has its own fairly well defined market: coal does not go in for lighting; oil and gas are not available in some sections; electricity is not widely used for house heating.

But, in certain areas, the markets of the home fuels overlap and—although each now has about all the business it can handle—when the war is over, all will be out looking for new customers. When peace comes, the areas in which the home fuel markets overlap will become battlefields for more business.

Opening shots have already been fired.

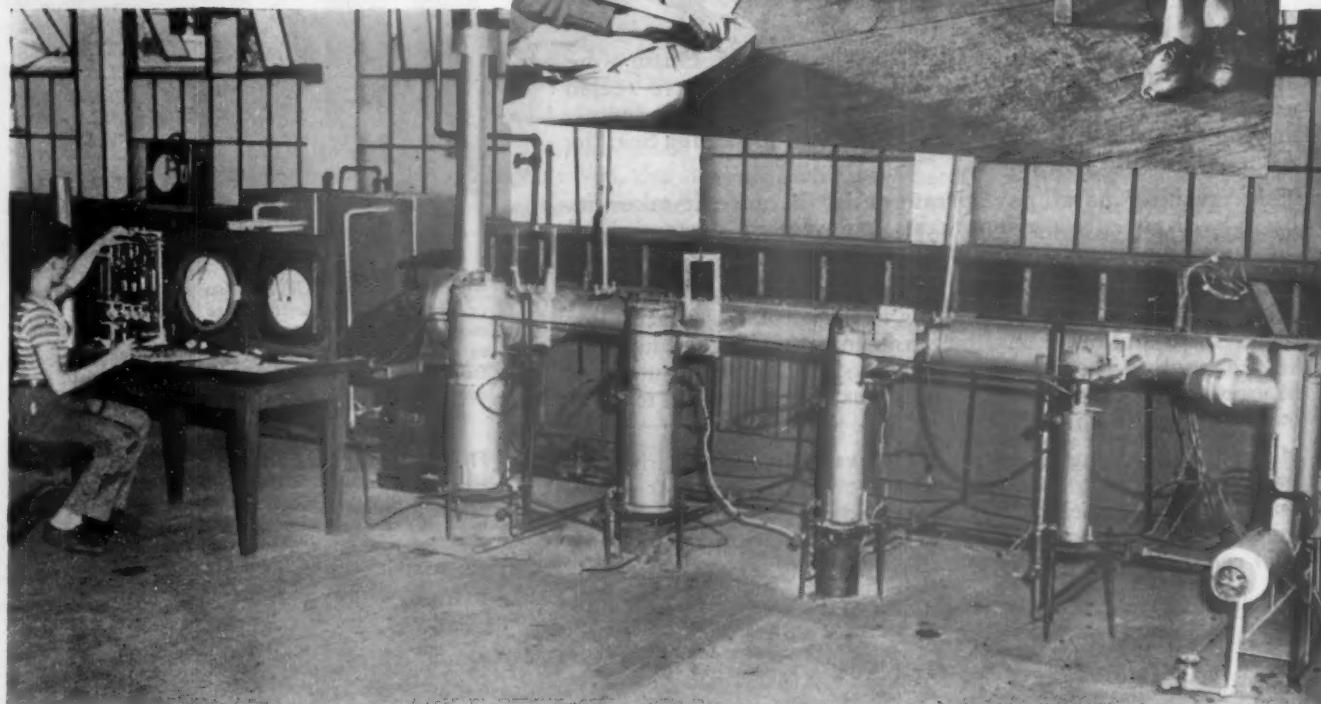
The anthracite industry, for instance, has announced a "secret weapon," on which it has been working for more than ten years, and with which it expects not only to hold its present territory but to establish new beachheads.

The secret weapon consists of a tested basic design for a new furnace utilizing an entirely new principle of burning

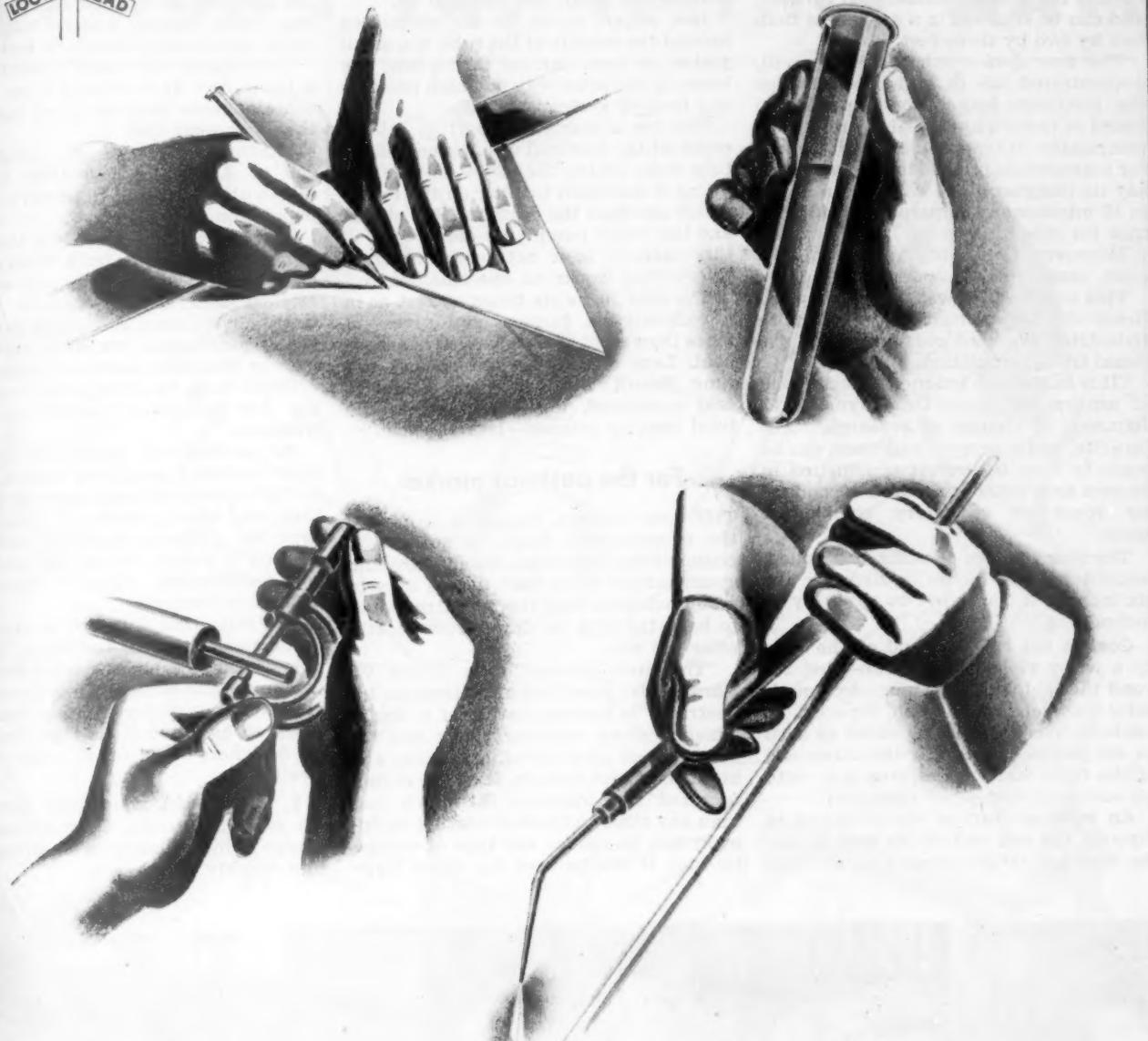
HARD COAL, soft coal, oil, gas and electricity are all busy developing amazing new ways to give the consumer more for his money—and are getting ready to fight it out on the home front when peace comes



Heating with bituminous coal will be clean and smokeless



Applying a new principle, the anthracite industry has perfected a better way to burn hard coal. Shown here are units of various sizes being tested to determine the most efficient design



Southern Hands Have Learned New Skills

THOUSANDS upon thousands of Southern workers are going to school today. Their classrooms are great shipyards...airplane plants...steel and aluminum plants...powder factories...arsenals...war-busy plastic and chemical industries...where they are learning the myriad skills of modern industry.

And on the trains and tracks, in the offices and shops of the Southern Railway System, we're learning new skills too . . . how to move more tons of freight, more thousands of passengers.

We're learning how to do our job more efficiently than ever before.

So, after the war, when you "Look Ahead—Look South," you'll see an army of strong, capable, level-headed American workers—including plenty of highly skilled craftsmen—pulling together to make the Southland's dreams come true.

Ernest E. Morris
President

SOUTHERN RAILWAY SYSTEM

The Southern Serves the South

coal. The new furnace weighs only about 75 pounds as compared with 1,000 pounds for a conventional coal furnace, and can be enclosed in a space less than two by two by three feet.

The new device substitutes a small, concentrated fire of high intensity for the relatively large, slow-burning fire found in today's hard-coal furnace. It is completely automatic, can be banked for long periods of time in mild weather, say its designers, and will heat a house in 15 minutes as compared with 45 minutes for other furnaces.

Moreover, they add, it is clean, efficient, economical to operate.

This new furnace was designed by the Research Department of Anthracite Industries, the hard coal producers' national trade association.

"It is based on a unique characteristic of anthracite," says Dr. Raymond C. Johnson, in charge of research. "Anthracite, under proper conditions, can be made to burn to perfect combustion in its own area without need for secondary air space or secondary combustion space."

The new furnace consists of a hollow metal tube four inches in diameter (or six inches—it comes in two sizes) by 18 inches long.

Coal is fed into one end of the tube by a worm stoker, and burns—just beyond the middle of the tube—to practically complete combustion. No soot, no clinkers. The fire itself is about as deep as six pieces of coal. At the other end of the tube, white ashes drop out—into an enclosed, dust-proof container.

An induced draft of air is sucked in through the ash end of the tube to fan the fire, and is then drawn on through

the incoming coal and up the chimney. It is not necessary to have a large-size chimney; a small tile flue will do.

Hot water, steam or air, circulated around the outside of the tube in a small jacket, is then carried throughout the house in the same way in which present-day heating systems operate.

The fire is started by putting a little combustible material into the end of the tube from which the ashes emerge, igniting it and then turning on the motor which operates the draft fan, the stoker and the water pump (assuming that, in this case, it is a hot water heater). Everything works on one small motor.

The coal burns six times as fast as in a conventional furnace and gives off more than eight times as much absorbed heat. Less coal is ignited at any one time. Result: More heat per pound of coal consumed, less coal used in the total heating process—less expense.

For the postwar market

THE new furnace, though well beyond the experimental stage, is not yet in commercial production. Basic plans and specifications have been turned over to manufacturers and the industry hopes to have the unit on the market shortly after the war.

"This new device," says Frank W. Earnest, Jr., president of Anthracite Industries, "is the realization of a dream which heating engineers have had for years for an economical, automatic and highly compact furnace. It can be manufactured and installed for much less than any other automatic heating equipment now in use for any type of domestic fuel. It can be used for either large

or small homes, can be installed in a house without a cellar. The new principle can also be applied to space heating, water heating and cooking equipment, and to magazine-feed boilers.

"Anthracite has many advantages as a home fuel. It is almost pure carbon, contains more heat units per cubic inch than any other fuel.

"Anthracite today heats about 5,000,000 of America's 34,000,000 homes—serves about one-fourth of the country's population.

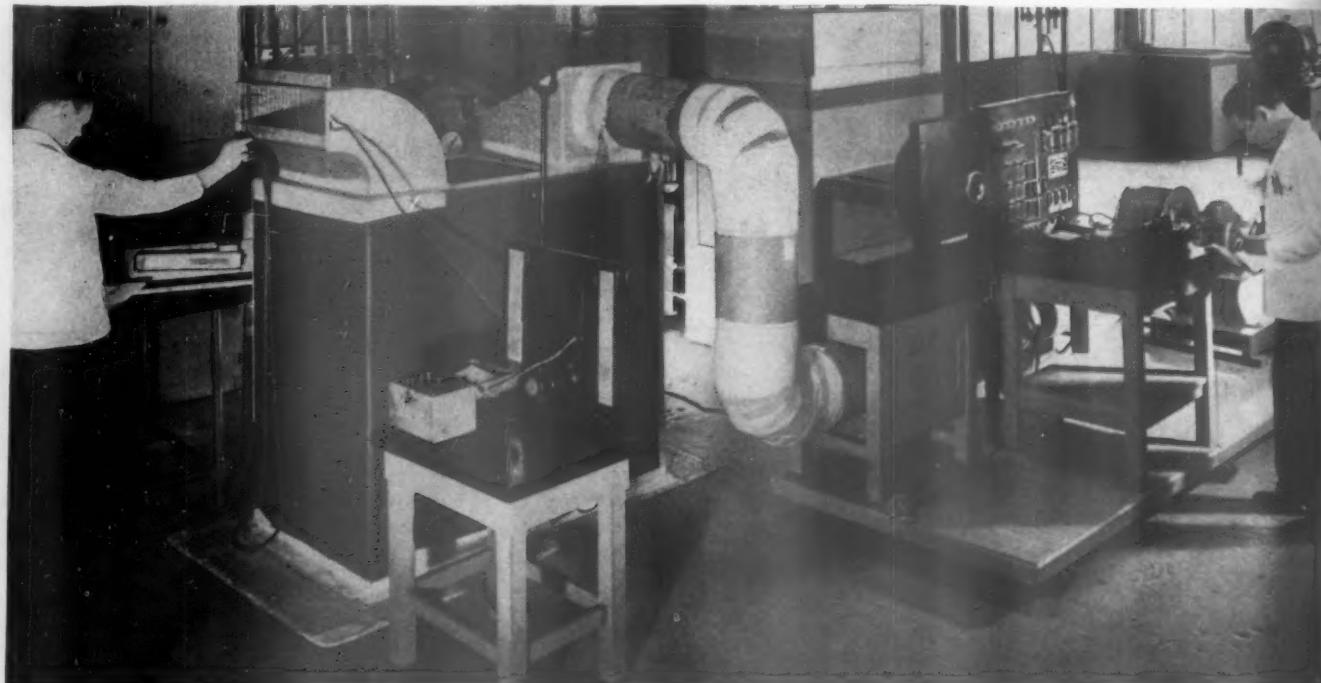
"After the war, hundreds of thousands of new homes will be built. With anthracite's natural advantages and with our efficient new heater—backed by national advertising, public education and dealer assistance—we count on widening our domestic market considerably.

Other fuels, too, will be in there fighting for increased sales—with new weapons.

Bituminous coal, which now heats almost half the country's homes, confidently expects to keep right on heating them and to add others. For frontal attack on postwar markets, its chief weapon is a new completely smokeless soft-coal-burning heater called the Bungalow Furnace.

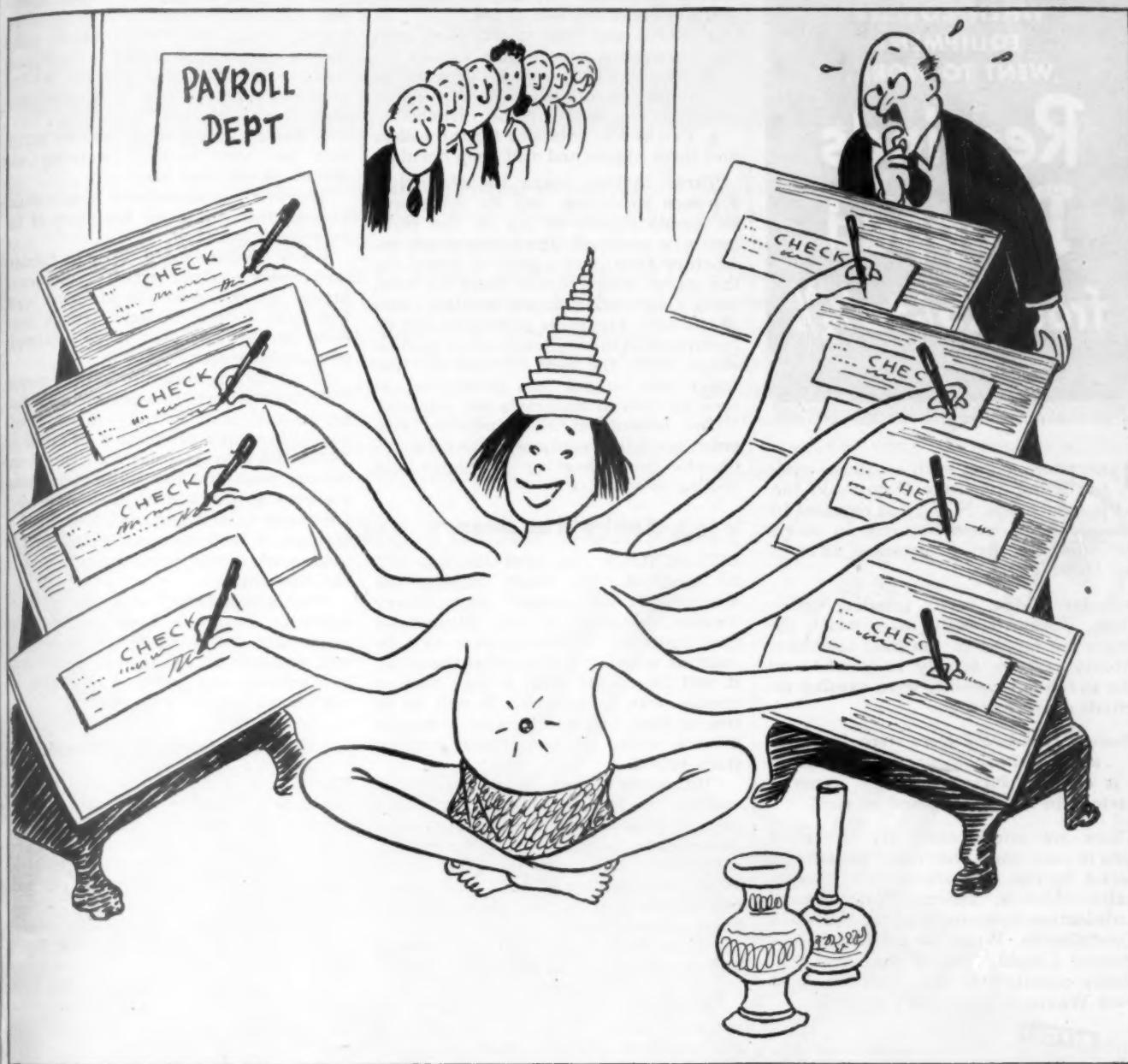
The Bungalow Furnace is about two feet square by three feet high, "is capable of comfortably heating a five-room dwelling—and will sell for about \$60." It is the product of more than two years' research by Bituminous Coal Research. Its designers claim for it, after exhaustive tests:

1. Absolutely smokeless operation. No soot, no grime. Only evidence of smoke is immediately after firing—and that quickly disappears.



Testing the efficiency of a gas furnace. In its research laboratories, the gas industry has developed, among other things, a new and better burner in which the flame is completely enclosed

NO. DON'T TRY IT THIS WAY!



SIVA, the Indian god with octopus arms, would be a little disconcerting to have around all day. Besides, writing checks and making out the payroll can be done with much less fuss!

If you want a payroll method that will —

Cut down the cost per check

Cut down the time it takes to write checks and get them to your employees

Cut down on record keeping — and help solve your manpower problem —

Simply call your nearest Comptometer Co. representative and ask for details on the Comptometer Check-

and-Payroll Plan. There's no charge . . . and he'll be happy to explain this quick and efficient method. The Comptometer, made only by Felt & Tarrant Manufacturing Company, 1712 North Paulina Street, Chicago 22, Illinois, is sold exclusively by the Comptometer Co.

COMPTOMETER

REG. U. S. PAT. OFF.

ADDING-CALCULATING MACHINES AND METHODS

HOW AMERICAN INDUSTRY PRODUCES MORE, FASTER,
BETTER—WITH BOWSER EXACT LIQUID CONTROL

WHEN BOWSER
EQUIPMENT
WENT TO WORK,

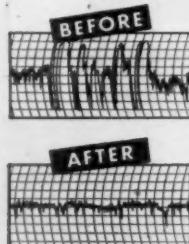
Regrinds Dropped from 25% to $\frac{1}{2}$ %

PRECISION gages, such as those made by Standard Gage Company, Inc. of Poughkeepsie, N. Y., and required by thousands of manufacturers in scores of industries, have tolerances as small as .00001 inch.

Standard Gage, in its grinding operations, works to .0001, after which the gages are lapped to the final tolerance. Abrasions, due largely to particles in the unfiltered coolant, were causing regrinds averaging 25%.

Bowser Pressure Filters were installed . . . and regrinds dropped to less than $\frac{5}{10}$ of 1%! Picture that in terms of savings in time, labor and money!

There are undoubtedly liquid-control jobs in your plant that could be handled better by one or more of these Bowser units—Meters, Filters, Proportioners, Lubrication Systems, Pumps, Stills, Oil Conditioners. Write for information. A Bowser Liquid Control Specialist will gladly consult with you. BOWSER, INC., Fort Wayne 5, Indiana.



Surface variations after finish-grinding with unfiltered coolant prepared only 2 days previously. Scratches, scarcely visible, caused regrinding.

Same operation, same machine, with Bowser-filtered coolant in use 7 days. All types of grinders showed similar improvement with Bowser Filters.

BOWSER
ESTABLISHED 1885

The Name That Means
Exact Control of Liquids

Not only has Bowser's war production earned the Army-Navy E... Bowser equipment has helped earn it for scores of other companies.

Buy War Bonds

2. Delivers half again as much effective heat from the same amount of coal as an old-fashioned furnace.

3. Utilizes every bit of coal that goes into it. Burns the coal so perfectly that you get one-third less ashes.

4. Burns any type of soft coal, even the unscreened run-of-mine variety.

5. Requires only about one-sixth as much manual attention as a conventional type of coal-burning furnace.

6. Can be left unattended for three days and three nights and still keep burning.

Three factors make the Bungalow Furnace smokeless, say its designers: an ample supply of air at the right points; a series of high-temperature refractory flues; and a path of travel for the gases which cause them to burn away thus adding to the heating value of the coal. The same principles will be incorporated in an ultra-modern kitchen range. Both the new furnace and the range will be put into production as soon as critical materials are released.

The bituminous coal industry also promises stoker equipment for fully automatic home heating in winter and cooling in summer.

Coal will be clean

BITUMINOUS coal after the war will be dustless. "It won't exactly be wrapped in cellophane," says Harry Vawter, director of the Bituminous Coal Institute, "but pretty close to it. In addition to being laundered at the mine, it will be coated with a thin film of plastic, wax or light oil. It will be so free of dust, you will be able to handle it with white gloves without getting them soiled.

"Bituminous coal is mined in 24 states," adds Mr. Vawter. "There's enough to last 3,000 years. Nine out of every ten tons are now mined mechanically—and that keeps the price down. With the exception of sand and gravel, bituminous coal is the cheapest of all basic commodities.

"When peace comes, bituminous coal will be all set to get more customers."

Fuel oil will be ready, too.

"Rationing has cut fuel oil's home market," says C. E. Lewis, president of the Oil Heat Institute, "but only temporarily. Tomorrow will see a great increase in the number of oil burners in operation. The oil industry looks forward to the creation of a half million new users every year for years to come."

In the '30's the best prospect for an oil burner, according to the industry, was the family with a monthly income of \$300 or more. The potential market was estimated at about 700,000 homes in areas where fuel oil was available. Tomorrow's natural market for oil burners, the industry points out, will be much larger. Reasons:

1. Great advance has been made recently in the design of oil burners. Tomorrow's units will be simpler, more efficient—will burn a wider range of fuels—will be more economical to operate.

2. Tomorrow's oil burners will cost

less than prewar models. Price trend of oil burners is down. It costs only 25 per cent as much today to produce an automatic burner as it did 11 years ago.

Most of the oil burners manufactured just before the war, the industry reports, went into FHA-financed small homes and FHA-financed reconditioned homes. "Our postwar market will include factory workers and other middle-income groups."

3. Tomorrow's fuel oil will be better, will be more widely available and doubtless will cost less.

The war has stimulated new and improved methods in all branches of the petroleum industry.

Wells produce more oil than formerly, refiners produce greater volumes of higher quality products at lower cost. Pipelines, barges, tankers, trucks, tank cars, are all operated more efficiently and at lower cost.

"Fuel oil for home use will be plentiful after the war," the petroleum industry makes clear. In spite of last year's record-breaking production of crude oil (4,500,000 barrels a day as against our prewar peak of 3,900,000 barrels) total reserves at the end of 1943 were only one-tenth of one per cent less than at the end of 1942. New wells and new fields were developed to keep pace with requirements.

"Our hemisphere," says the Oil Heat Institute, "has the most abundant reserves in the world. Moreover, science will continue to advance in technique of discovery and recovery to utilize every known source of liquid fuels."

Gas is widely distributed

FROM some of the same wells which produce petroleum we also receive natural gas. Most of our natural gas, however, comes from wells which contain gas only—some 60,000 of them together. Pipelines carry the gas hundreds of miles.

Gas, either natural or manufactured, is available in every state but not in every community.

More than 18,000,000 gas ranges are in use, the industry reports. "More people cook with gas than with any other fuel."

Homes which already have gas ranges are natural prospects for gas heaters, and conversely, new homes which install gas for heating are natural prospects for ranges, refrigerators and water heaters.

The gas industry expects to make the most out of the "present trend toward gas." "We confidently expect to build the most prosperous and progressive era gas has ever known," says Ernest R. Acker, president of the American Gas Association.

In the past year, the association has quadrupled its research program and is now raising \$1,400,000 for additional research, national advertising and promotion.

Its engineers have developed a new type burner in which "the flame is completely enclosed and burns in the prod-

SKY SWEEPERS

40-mm. GUN CREWS perched precariously over their ship-sides sweep the skies with deadly aim when enemy aircraft threaten.

Whether it be 40-mm. shells no larger than a man's wrist or 16-inchers for the big guns, bombs, rockets or block busters, America produces them with skill and in gigantic quantities.

In the hundreds of arsenals here at home, supplying our fighters with the wherewithal to do battle, one element is vital. This is

oil. Fine lubricants, cutting oils and coolants that permit high speed precision and on-schedule production.

Texaco insures quick and convenient sources of supply through its *more than 2300 wholesale supply points* all over America.

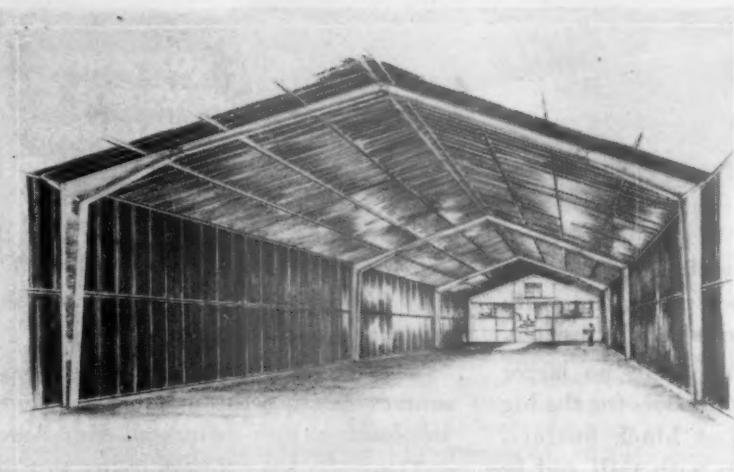
Then — to help in delivering full speed, efficiency and economy from these quality petroleum products, Texaco makes available, from the same sources, its skilled engineering service.

THE TEXAS COMPANY



Official U. S. Navy
Photograph





EMERGING FROM EMERGENCY and from 30 Years' Experience in Prefabrication

Prefabrication of steel buildings is not a new development in Butler factories.

In more than 30 years of specialized experience Butler engineers have brought prefabrication through one practical stage after another.

The use of Butler-Built Steel Buildings is widespread. In a score of industries thousands of them serve many purposes most economically.

War emergency brought into sharp focus their inherent advantages. Strength in relation to weight. Compactness of materials in shipping. Simplicity of assembly. Fire safeness. Mobility. These are some of the prime requisites met by Butler-Built Steel Buildings on island and continent

hopping battle fronts around the globe.

Prefabrication is not static in Butler factories. Entirely new designs are emerging from 30 years of know-how and emergencies arising from the war. An architect's rendition of one of them is reproduced above. It is the Butler-Built Rigid-Frame steel building of which thousands are on the production lines. It is a design that will functionally serve many needs better.

Although buildings are not available, Butler engineers are in a position to supply information which should be helpful in the early stages of your postwar planning.

Address all inquiries to: 7456 E. 13th Street, Kansas City 3, Mo. or 956 Sixth Ave. S.E., Minneapolis 14, Minn.

BUTLER MANUFACTURING COMPANY
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BUTLER BUILT

STEEL BUILDINGS

STEEL BUILDINGS...TANKS (Storage, Processing and Transport)...FILTERS
STILLS...DRY CLEANING EQUIPMENT...RURAL GAS SYSTEMS...SEPTIC TANKS
GRAIN BINS...FARM EQUIPMENT and PRODUCTS OF OTHER METALS.

ucts of its own combustion." The flame in this new burner is said by its designers to be "bright, sharp, hard and blue," and to make possible better control of heat and greater heating speeds.

Also it makes possible a cooking range that has a perfectly smooth top surface.

Among improvements which the gas industry promises in the domestic cooking field are: complete automatic ignition of all burners, faster radiant broiling, cooler oven surfaces, better visibility in ovens, smaller, more efficient burners.

Main objective in the gas industry's drive for more customers in the post-war period will be to gain wider acceptance of the "all-gas home." Included in the all-gas home will be a year-round air-conditioner, controlling temperature and humidity, filtering and circulating air.

Also included will be a "package all-gas kitchen" which "combines modernity, beauty, comfort and efficiency exceeding anything previously known." In the package kitchen, "cabinets, sink, range, refrigerator, dishwasher and water heater are coordinated in design and properly sized to fit with each other."

To develop a program for increasing the sale of gas fuel and gas appliances, the American Gas Association has set up a Postwar Planning Committee. It has also set up an Action Committee of 20 leading gas utility executives to carry out the recommendations of the Planning Committee on the local level.

The industry's program calls for every gas utility in the country to promote the use of "certified performance" gas appliances and equipment in its own community, whether or not the company itself sells equipment. The industry is also working out a special program for training local salesmen.

"Gas will be the aggressor in the coming competition in the home field," says A. M. Beebe, chairman of the Planning Committee. "But we are not going to get into any wasteful and needless battle with electricity. The use of electricity should be encouraged for those purposes for which it is particularly suited, such as for lighting and power."

Electricity, however, is not planning to stay put.

Electricity performs five services in the modern home: It lights, refrigerates, cooks, heats water, operates appliances. It is seriously eyeing the sixth function—home heating. Heating could be more important to electricity in the postwar period than all the other five services put together.

Since the war began, electric companies have stepped up their output more than 70 per cent.

"The increase in generating capacity for 1943 alone," points out Kinsey Robinson, president of the Washington Water Power Company, "was greater than the entire capacity of all the plants contributing to the public supply at the beginning of World War I. When peace comes, a substantial portion of our present power capacity will loom over us as



Take a good look, Mister!

— it's a preview of tomorrow

Here's a scene you could never forget... the workmen in their masks... the flashing of electric arcs... a great ship that takes form even as you watch. Yes, look closely, for all the signs are here: The road to new methods, new achievements in production lies in the process of welding!

The formative years of welding have passed. In the future, welded products will compete with welded products. That's why the accurate controlling of costs, procedures, production, and quality are a postwar necessity.

In your own postwar plans, you will take advantage of the new speed and ease made possible by welding in the fabrication of metals... of the economies of lighter, stronger construction.

Take advantage, also, of the vast store of experience available to you through the P&H organization which is not only one of the world's largest builders but also one of the world's largest users of welding equipment.

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 CORPORATION
 ARC WELDERS • EXCAVATORS • ELECTRIC CRANES • P&H MOTORS • HOISTS • WELDING ELECTRODES
 Overhead Cranes • Electric Hoists
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 Arc Welders • Welding Electrodes
 MILWAUKEE 14, WISCONSIN



SPECIALIST IN GETTING THE "BUGS" OUT

Merely saying, "Ideas are dandy — let's have yours," isn't enough to get employes to suggest improvements in products, methods or processes.

One reason the Morton Suggestion System has worked so well in over 10,000 installations in 16 years is the specific nature of the appeals it uses. "Getting the bugs out" is just one important line along which the Morton Suggestion System guides creative employe thinking.

Proved, resultful appeals are one of many features that enable this expertly planned idea producer to work anywhere, anytime. Even though you now operate your own, it will pay you to investigate the Morton Suggestion System. Its ability to raise employe morale, improve quality of ideas and more than pay its way, can be extra valuable in the period just ahead.

Get the cost-free details immediately. Simply drop us a line — we'll do the rest.

**MORTON MANUFACTURING CO.
SUGGESTION SYSTEM DIVISION**
350 N. Leamington Ave., Chicago 44, Ill.

a gigantic problem."

Generally speaking, the industry sees a bright future. "Surveys by 22 of the larger utility companies," says Howard S. Bennion, managing director of Edison Electric Institute, "indicate that domestic electric service will increase more than 50 per cent from 1942 to '50."

One out of every four families wants a frozen-food cabinet, in addition to the household refrigerator. A big demand is anticipated for electric dishwashers, garbage disposal units, automatic electric blankets, electric laundry equipment and ventilating and air-cleaning equipment.

Several years ago, the electric industry began promoting the "modern kitchen" and the "all-electric home." This is now being expanded into a joint program involving other branches of the electrical industry to be known as the "electrical living" program.

If electricity expects to go' places in the domestic field after the war, however, industry leaders agree, it will have to find some device that will have the same potential effect on the consumption of power as the refrigerator, range and water heater.

In other words, it will have to go in for home heating and air conditioning.

As Philip Sporn, chief engineer of American Gas and Electric Service, puts it: "The 'all-electric home' cannot become a reality until electricity is used for heating. The electric home of tomorrow, without electric heat and air conditioning, will consume only 4,917 kilowatt-hours of power a year. But electrically heated and air-conditioned it will consume 14,500 kilowatt-hours."

Except in a few sections electricity today cannot compete in price with other fuels for home heating. The industry, however, sees a way to remove that disadvantage through the development of a new device (now in the experimental stage) called the Heat Pump.

The Heat Pump is not a revolutionary idea. Basically, it is nothing more than an ordinary refrigerating plant, say its designers. But it "makes use of the heat discharged at the condenser end rather than the cold produced at the evaporator end." Engineers refer to it as the "reverse refrigeration cycle." It can be used for both heating and air-conditioning. The Heat Pump is so named because it absorbs heat at low temperature from the outside air or from a water supply and then raises it—or pumps it—to a higher temperature level. Simply, if not technically, stated, it absorbs heat



WRIGHT AERONAUTICAL CORPORATION

Aluminum Fins for Plane Engines

Airplane engines may now have aluminum fins for cooling made by a new method which gives almost twice the cooling area of the all-steel fins. Sixty fins can be mounted on a cylinder barrel in the same space formerly required for 40 steel fins.

Formerly, cylinder barrel fins were machined by cutting narrow grooves into a solid steel barrel reducing the actual thickness of the cylinder wall to one-eighth of an inch. The new fin eliminates this difficult machining opera-

tion. The fin is produced by folding strips of sheet aluminum, shaped into half circles, and snapping them into shallow dovetail grooves cut in the barrel.

The aluminum fins can be made to almost any desired height.

The new barrel does not materially affect the over-all weight of the engine, but it does save a considerable quantity of raw material since the rough forging for the new barrel is much lighter than that for the older model.

In war and peace the world's safest transportation



THROUGHOUT the years, the safety record of the American railroads has been so outstanding that people have rightly felt safer on a train than traveling in any other way.

In view of this, it is worth while to know the safety record of the railroads at war.

Railroad passengers are three times safer in this war than in the last one.

With passenger traffic at a new high in 1943, the average passenger rode in greater safety than in such typical peace-time years as 1938 or 1940.

There have been less than three passenger fatalities for each billion passenger miles traveled.

This record has been made despite the necessity of getting the fullest use out of equipment—and despite the strain under which railroad folks must work.

This is a good record. To make it perfect is our constant goal. And it is fitting to pay tribute to the vigilant spirit and devotion today of the men and women who have made this record in the course of doing the greatest transportation job in history.



AMERICAN RAILROADS
ALL UNITED FOR VICTORY

LOOKING AHEAD?



FREE BOOK helps plan packaging of post-war products

New, streamlined packaging methods, developed for shipping war materiel, will have valuable application to your peacetime products. Familiarize yourself with these new packaging techniques—send for the KIMPAK* "post-war packaging book," just off the press.

Right now, KIMPAK is mighty busy convoying military materiel to our fighting forces. But after victory KIMPAK will lighten, safeguard and beautify the products of peace. It'll pay you to learn more *now* about this amazingly resilient, compact cushion for products going places. Absorbs jars, cuts packaging time, reduces package size. Various types to protect anything—from pianos to jewelry. Get the whole story from this fascinating book. And for a post-war packaging *plan*, call, write or wire for a KIMPAK man.

*KIMPAK (trade-mark) means Kimberly-Clark Wadding



KIMBERLY-CLARK CORPORATION
Creped Wadding Division, Neenah, Wisconsin

Send copy of FREE KIMPAK BOOK on post-war packaging methods to

Name _____

Firm _____

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and then adds more heat by compression.

Remarkable feature about the Heat Pump is that it provides heat equivalent to from three to five kilowatt-hours of electrical energy for each kilowatt-hour of electricity required to operate it! This, in effect, engineers point out, is the same as stepping up from three to five times the heat value of the coal burned at the central power station to produce the electricity to operate the reversed refrigeration equipment.

It sounds like perpetual motion but it is not, engineers explain, because it creates no energy. But, when perfected, it will eliminate the price handicap which electricity is now under in competition with other fuels in the home heating field.

More than 30 Heat Pumps are now operating in the United States in commercial buildings but none in homes. One mid-Western manufacturer of heating equipment, however, expects to have 50 Heat Pump installations in home service by the end of this year.

Yes, postwar promises a hot fight on the home fuel front. Out of it will come, not only new industrial plants, new wholesale and retail establishments, more jobs for men who design, make, advertise, sell, install and service equipment, but—in the traditional American fashion—increasingly better products at lower costs for the consumer.



One of Chicago's Greatest
Night-Time Events
(With an Audience of More
Than a Million) *



AND an event it is, the evening home-coming of Chicago's best loved family newspaper! The Chicago Daily News is eagerly welcomed by more than a million reader-friends. They value its trustworthy news, international, national and local. They get a tingle from its superlative sport pages. They are entertained—and often inspired—by its special columns. They are helped by its distinguished household section of practical information. The Daily

News is an institution in Chicago's home life.

Advertisers, likewise, acknowledge The Daily News to be an institution BASIC to their marketing activities in Chicago. For 43 consecutive years The Daily News has carried more Total Display linage than any other Chicago newspaper—morning, evening or Sunday.* Such leadership could not be so long maintained if advertisers were not convinced that The Daily News is

CHICAGO'S BASIC ADVERTISING MEDIUM

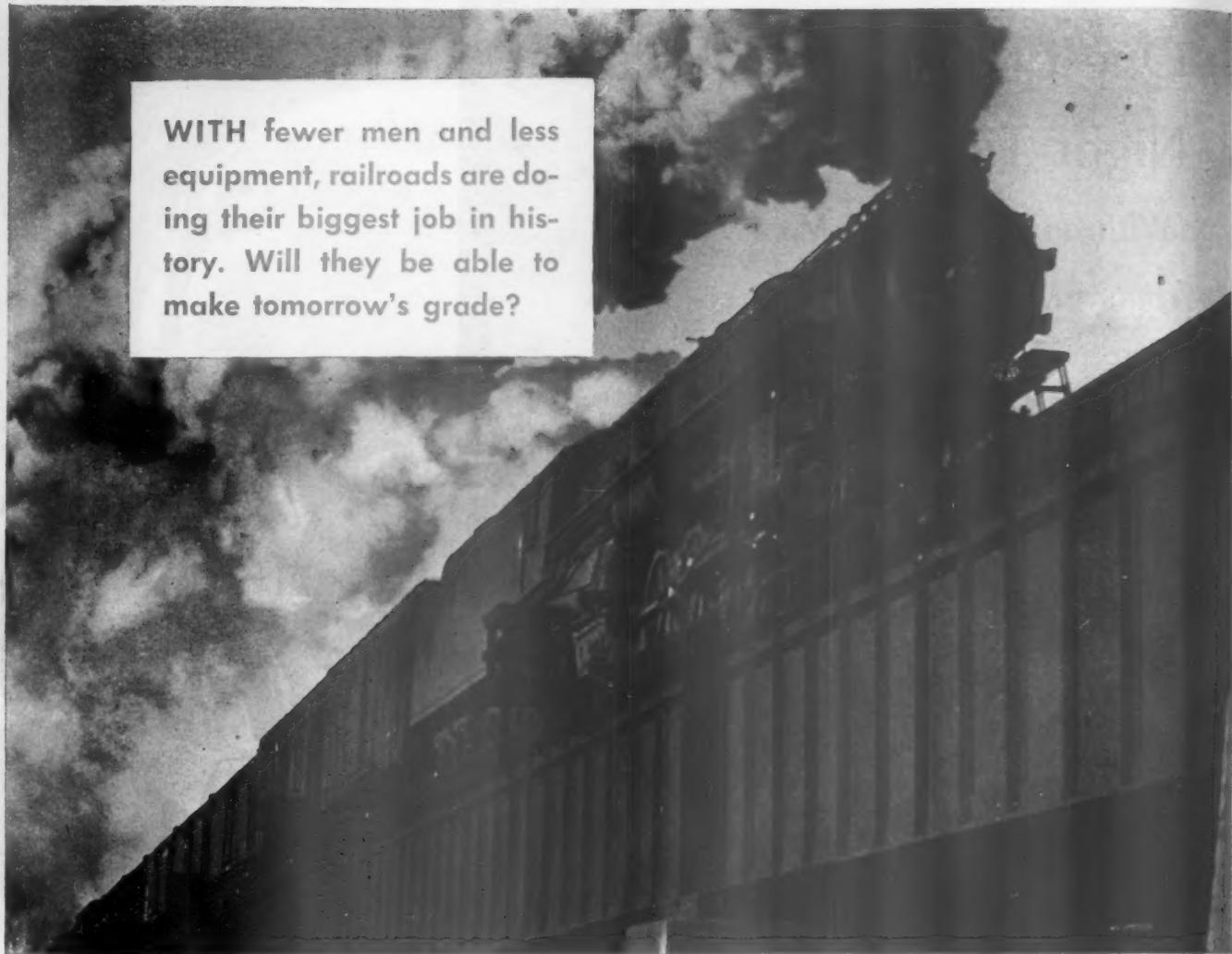
*For fair comparison, liquor linage omitted since The Daily News does not accept advertising for alcoholic beverages.

THE CHICAGO DAILY NEWS

FOR 68 YEARS CHICAGO'S HOME NEWSPAPER
ITS PLACE IN THE HOME IS ONE OF
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NEW YORK OFFICE: 9 Rockefeller Plaza
SAN FRANCISCO OFFICE: Hobart Building



WAYNE BRUMBAUGH

WITH fewer men and less equipment, railroads are doing their biggest job in history. Will they be able to make tomorrow's grade?

The Rails Keep Rolling Along

By ROBERT S. HENRY

MANKIND, being so much like the lowly lightning bug which is equipped only to see where he has been and not where he's going, had best judge the future of railroading by reviewing the 20 years between the two World Wars and the pay-off when this war came.

In this war, the industry which so many had "written off" became not only more essential than ever but demonstrated an elasticity and resourcefulness which astonished everyone—except maybe those railroad men and cooperating shippers who had laid the plans to meet the emergency.

Today the railroads are carrying just about double the daily load of the earlier war—are doing it with one-third fewer locomotives, one-fourth fewer cars and 500,000 fewer men. They are doing it with none of the congestion and delays

of that time and are doing it with their own resources. Moreover, instead of costing the taxpayers nearly \$2,000,000 a day, as did government operation of the railroads during the first war, today's operations are paying more than \$5,000,000 a day in taxes.

That record, and the methods by which it was achieved, is the starting point for any consideration of the railroads' future as major channels for investment, major employers of labor, major purchasers of goods, and major payers of taxes.

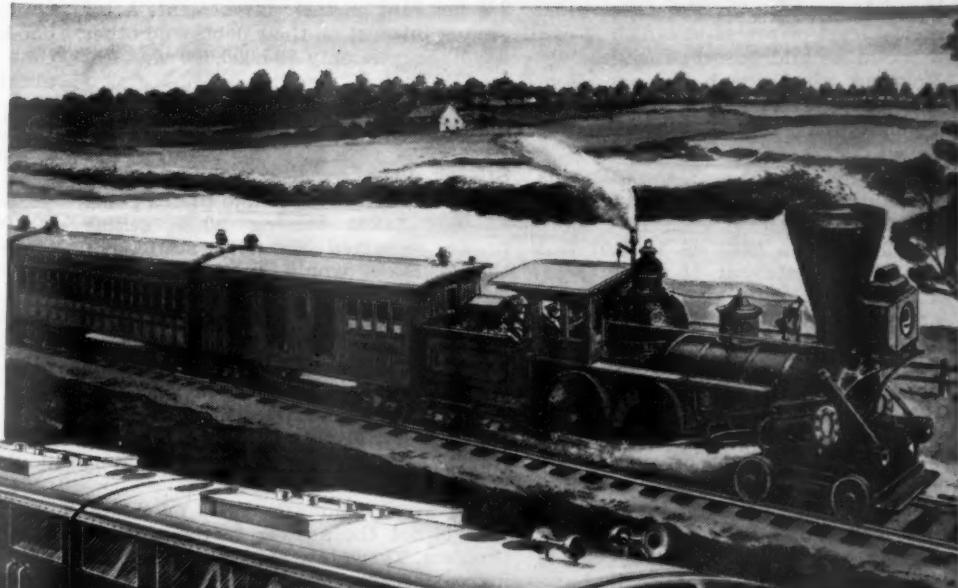
Assuming that after the war there will be changes in the art and practice of railroading, what are the prospects of railroading as a business? Can it, like every other self-supporting private business, meet its pay rolls, pay its bills, carry the charges on the capital used to

create it, pay its taxes, and earn its profits, if any, out of the price it receives for the product it makes and sells?

The plant in which the railroad manufactures its product is odd in shape, thousands of miles long and mostly not more than 100 feet wide. Nevertheless, it is a factory for the production of the only thing the railroad has to sell—ton-miles and passenger-miles. The problem of the railroads, like that of every other business, is to manufacture a salable product and to sell it at a price which covers the cost of production.

The major factors in this equation, so far as the railroads are concerned, are, on one side: the level of wages, the level of prices paid for materials and supplies, the tax load, and, least important,

Locomotive "No. 1," which puffed its way across the dales of mid-Wisconsin in 1851, was one of the trail blazers for the present magnificent transcontinental system of the Milwaukee Road.



Movement of vital war freight was speeded and tonnage increased when the Milwaukee Railroad installed General Motors Diesel Locomotives on the 225-mile mountain zone between Avery, Idaho, and Othello, Washington.

PATTERN FOR FINER TRANSPORTATION

★
KEEP
AMERICA
STRONG
BUY MORE
WAR BONDS
★

WRITTEN into the grueling war job the railroads of America are doing, is the story of this mighty titan of the rails. This is the General Motors Diesel Locomotive. It is displaying the unusual stamina, speed and willingness to work ceaselessly which these urgent times demand. And with such tireless, low-cost, swift service these GM Diesel Locomotives are providing a pattern for finer transportation in the greater days to come.



LOCOMOTIVES ELECTRO-MOTIVE DIVISION, La Grange, Ill.

ENGINES . . . 150 to 2000 H.P. . . . CLEVELAND DIESEL ENGINE DIVISION, Cleveland 11, Ohio

ENGINES . . . 15 to 250 H.P. DETROIT DIESEL ENGINE DIVISION, Detroit 23, Mich.

the fixed charges. On the other side, are: the level of prices at which it can sell ton-miles and passenger-miles.

Running all through the equation, and affecting every other factor, is the most variable factor of all: volume of business.

During the present war, the railroads have paid the highest average wages in their history, averaging in 1944 more than 92 cents an hour as against 73.3 cents in the last year of peace, 1939. (In 1918, the closing year of the First World War, the average was 45.8 cents.) Price levels of the materials and supplies railroads buy and use have gone up from an index of 130 in 1939, when war began, to an index of 167 at the end of 1943. Railroad taxes in 1939 averaged 8.9 cents out of each dollar taken in; in 1943, 20.4 cents.

On the income side, the average pay received for hauling a ton of freight one mile has declined from 0.973 cent in 1939 to 0.933 cent in 1943. On the basis of 1943 business, that subtracted some \$290,000,000 from rail revenues.

On the other hand, although passenger fares still remain far below the 1918 level, and still farther below that of the '20's, there was a slight increase from 1939 to 1943 which, on the present phenomenal level of travel, adds nearly \$40,000,000 a year to rail revenues.

At the 1939 levels of manufacturing costs and selling prices of their product, the railroads made, before charges, less than \$600,000,000—a rate of return of

2 1/4 per cent on their investment. After paying interest on their debts and other fixed charges, only \$93,000,000 was left for the owners.

Volume is near top

SINCE 1939, fixed charges have declined but, with wages and prices going up and taxes soaring while selling prices remained virtually stationary, the railroads would long before now have been out of business—if that were all there is to the equation.

But there is another factor, the variable *v* for volume, which runs through the whole equation with astonishing effect on the results. Because of increases in volume, railroad earnings in 1943 before fixed charges were approximately 2 1/4 times those of 1939.

However, volume and yet more volume is not the answer to the railroad problem. There is a point beyond which increasing volume—even if it were to be had and handled—cannot overbalance rising levels of wages, prices and taxes.

The disquieting fact is that the railroads have reached that point.

Railroad earnings after expenses and taxes reached their all-time peak in 1942. Volume of sales of railroad services went up more than 20 per cent in 1943 compared with 1942, but wage rates rose nearly ten per cent, price levels nearly nine per cent, and taxes, which in 1942 had taken two-fifths of what revenues were left after paying

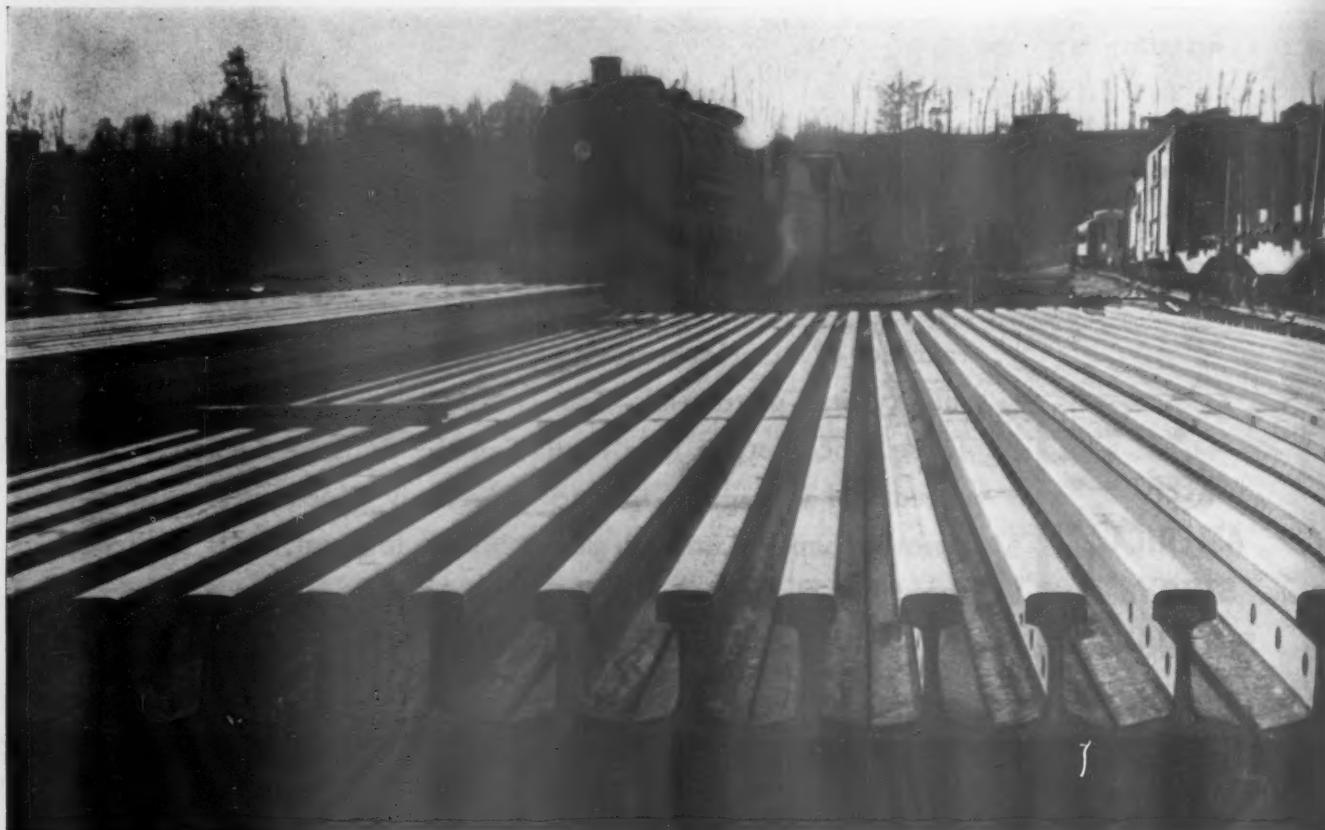
operating expenses, took more than one-half in 1943. The final result was that with a sales volume \$1,600,000,000 greater than in 1942, the railroads in 1943 had \$125,000,000 less in net earnings after expenses and taxes.

These trends continue, moreover, in 1944. In the first five months of this year, volume of sales increased \$238,000,000 compared with the same months in 1943, but what was left after paying operating expenses and taxes decreased \$152,000,000. This level of net earnings is not only less than in 1943 but, in April and May, passed below the level even of 1942. Indeed, by mid-summer of 1944, the railroads were making little more than in 1941, although the total sales of their services were not far from doubled.

In the railroad business, there is magic in volume of traffic but, as the record since 1942 demonstrates, there is not enough magic—even if such volumes of traffic are to be had after the war—to enable the railroads to solve the mathematical problem of their future, if other factors in the equation remain unchanged.

With such volumes of traffic as are at all likely after the war, there will have to be changes in the four cost factors of the equation—wages, prices, taxes and fixed charges—or in the selling prices of ton-miles and passenger-miles, or in both, if the problem is to be solved successfully.

But, as experience of other lines of



H. W. FECHNER

Change one part of a railroad and you usually have to change others. Bigger engines, for instance, may call for bigger tracks, stronger bridges and improved shop layouts

Right—for the night mission

At four hundred miles an hour, in the high dome of the night, a fighter pilot can't risk distraction by glare from his many-faced instrument panel.

So Black Light lamps made by Sylvania reveal the fluorescent-treated instrument dials at any intensity the pilot wants. There is no glare, no tell-tale glow to be picked up by ack-ack batteries or enemy night fighters.

This development is one of Sylvania's many wartime assignments. Like all of them, it is being discharged in a way to earn a reputation for manufacture to one standard—the highest anywhere known.



Right—for the night driver



The postwar car is one of the many places where similar application of Sylvania Black Light might well be used in the future.

Eliminating instrument-panel glow, without putting the driver in the dark about speed, gas supply and so on, it can mean even greater safety in night driving.

For the present, of course, such good things must remain in the realm of future possibilities. But you can count on this: when they come, they will be made to a single standard—and that the highest anywhere known. Sylvania Electric Products Inc., Executive Offices: 500 Fifth Avenue, New York 18, N. Y.



SYLVANIA

ONE STANDARD—THE HIGHEST ANYWHERE KNOWN.

BUY WAR BONDS



RADIO TUBES

Even before broadcasting graduated from earphones, Sylvania had specialized in the production of the most vital radio component—the radio tube. And Sylvania has been first with standardization of radio tubes for universal use in both home and automobile sets—first to introduce single dry cell battery radio tubes to make radio more portable for both war and peace.



ELECTRONIC DEVICES

Just as news photos are "heard" around the world, the day will come when actual copies of documents and blueprints may be transmitted over wires and ether. The recorder tube made by Sylvania is the electron tube that makes such an aid possible not only to journalism but to commerce, industry and the arts.

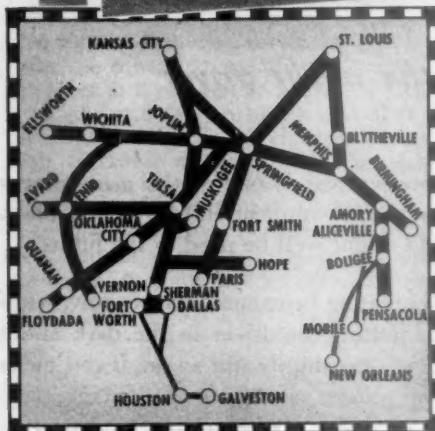


FLUORESCENT LAMPS AND FIXTURES

Sylvania started a revolution in artificial lighting by aggressively developing and selling cool and glare-free fluorescent illumination. This came in time to help the miracle of American production for war. This revolution will be continued after the war until the most efficient and economical lighting known plays a major role in relighting peace-time America.



FRISCO LINES



5,000 MILES IN
Missouri, Arkansas, Oklahoma,
Texas, Kansas, Tennessee,
Mississippi, Alabama, Florida.

Connecting Link

BORDER-TO-BORDER
COAST-TO-COAST



A Great Railroad

business shows, it is difficult, even where desirable, to reduce cost factors or increase selling prices. Added to the difficulties which ordinary business faces in doing such things, the railroads must meet strict government regulation of selling prices, a strong, if not controlling, government influence on wages and working practices, and the controlling influence of government on taxes. Not a great deal of room is left for the exercise of the skill of business management—and yet it is within that narrow space that the future of railroading as a private, self-supporting business must be worked out.

The prices at which railroads are permitted to sell their services may have to go up for a time—as they did during and after the last war—but it would be only for a time. The twin pressures of commercial necessities and public regulation are likely in the long run to hold rates down.

Wage levels too might decline tem-

porarily, but the whole trend on railway wages for half a century has been strongly the other way. There is little likelihood of much relief in tax rates. Interest and other fixed charges will be somewhat reduced, but, if by some miracle all railroads could become debt-free tomorrow, the effect would be small compared to the increases in wage rates, price levels and taxes which have

come about since the beginning of the war, and which bid fair to be carried over into the peace.

So stated, the future of the railroads as privately owned and managed business enterprises does not look bright—and yet there is room for reasonable optimism.

If railroad managements are permitted to pursue it, there is another way of cutting the cost of producing transportation service—by increasing the output of transportation per train per hour, per car per day, per dollar of wages paid, per dollar invested. That is the way railroads have come this far.

Twenty years ago, the average freight car turned out about 550 ton-miles of transportation per day. In 1943, it turned out nearly twice as much. Twenty years ago, a freight train produced less than 8,000 ton-miles of transportation for each hour it was on the road. Now it does more than twice that much. Twenty years ago, for each dollar in



Two-way radio will be widely used on tomorrow's trains but less as a safety measure than as a means of reducing delays

porarily, but the whole trend on railway wages for half a century has been strongly the other way. There is little likelihood of much relief in tax rates. Interest and other fixed charges will be somewhat reduced, but, if by some miracle all railroads could become debt-free tomorrow, the effect would be small compared to the increases in wage rates, price levels and taxes which have

vested in railroad plant and equipment, 25 units of traffic were produced per year, now 38 units. In short, machines and dollars have been made more productive.

Much of this gain, of course, is due to the use of railroad plant nearly up to capacity but even capacity volume would not have produced such results without research and invention, invest-

The SPEEDWAY of Posting!

ACCOUNTS RECEIVABLE

ACCOUNTS PAYABLE

PAYROLLS

GENERAL LEDGER

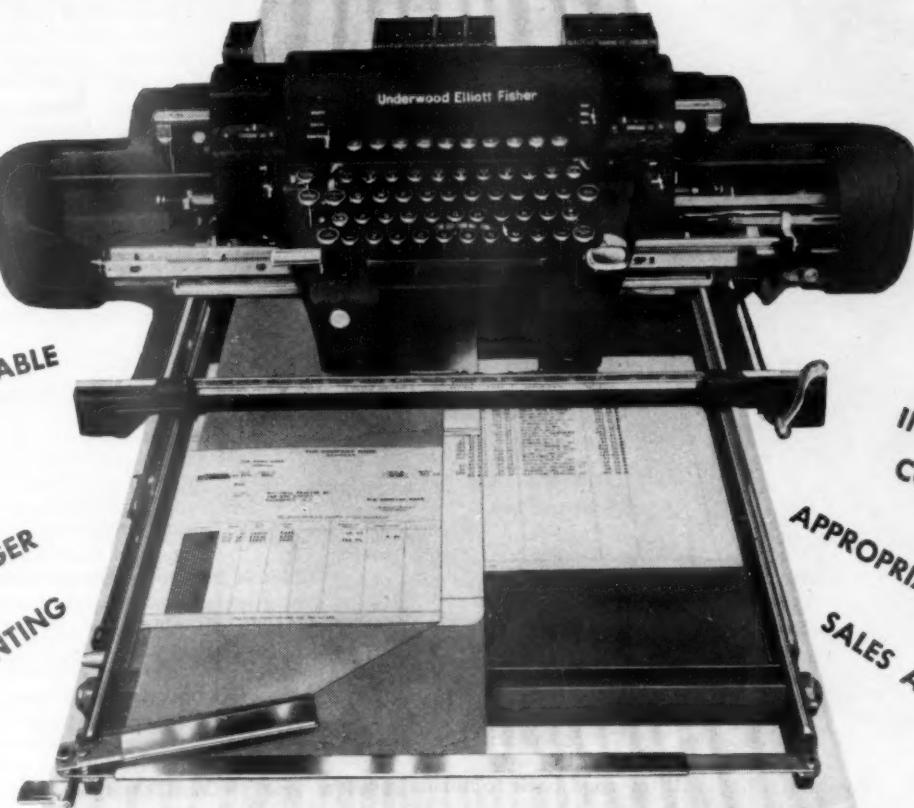
TAX ACCOUNTING

COST RECORDS

STOCK RECORDS

INVENTORY CONTROL

APPROPRIATION LEDGERS
SALES ANALYSES



It's down the stretch . . .

At the end of each month . . .

That Elliott-Fisher's speed way of posting . . . counts most.

But it's right from the start . . . right through each day . . . that the Elliott-Fisher saves important time and money for you.

Man hours and woman hours are turned to minutes. More work is sped through each day. The machine does everything. All adding, subtracting, totaling, and cross-balancing is automatic.

Your many different records are handled accurately and with dispatch. Each complete job, with its related entries, goes through in one operation.

Speed comes . . . from Elliott-Fisher's exclusive flat writing surface which provides quick insertion, alignment, and removal of forms.

. . . from the carbon paper roll that feeds between the sheets neatly and instantly.

. . . from the standard single "touch-type" keyboard, that's a cinch for every typist.

. . . from the short hand travel, automatic tabulating, and line spacing.

. . . from a dozen other time-cutting features.

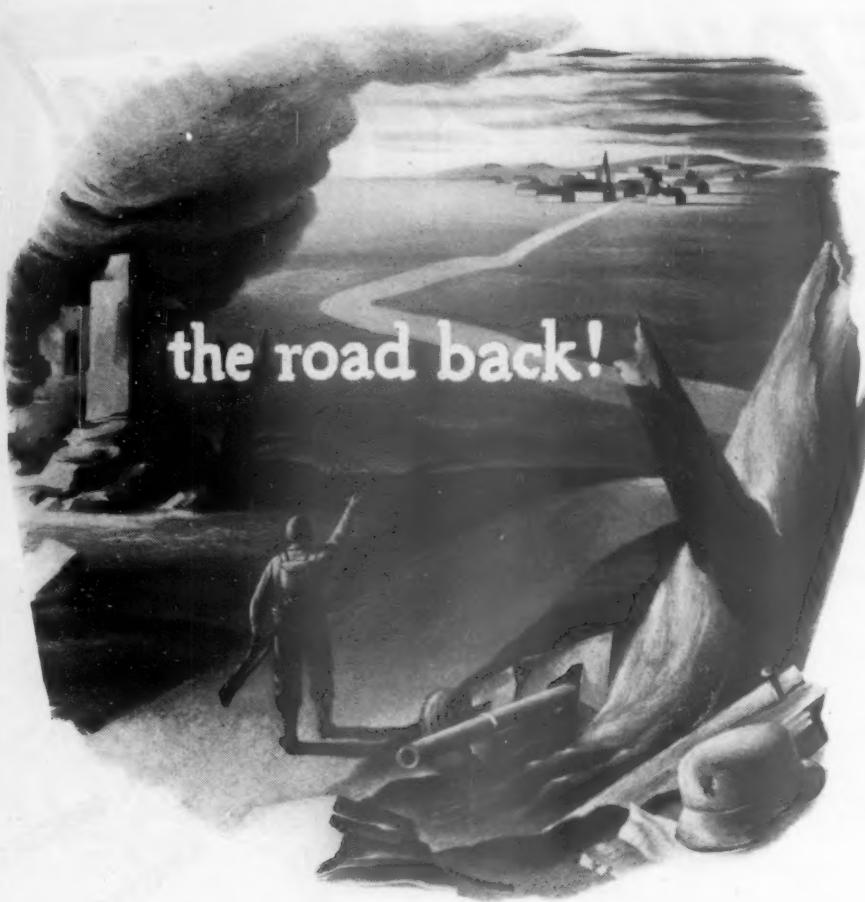
It will pay you well to start your accounting on the "Speedway of Posting". Call your local Underwood Elliott Fisher office now for further information on the time and money saving performance of this simple machine.

Elliott Fisher Accounting Machines are available
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Our factory at Bridgeport,
Connecticut, proudly flies
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ments calling for skill
and craftsmanship of the
highest order . . .

Underwood Elliott Fisher Company
Accounting Machine Division • One Park Avenue, New York 16, N. Y.



HOW LONG . . . how smooth . . . will the road back to normal peacetime living be?

Will cross-purposes of Industry . . . of Labor . . . and of Regulations . . . befoe the road and impede our journey?

Will soldiers returning from overseas find a homeland that is foreign to them . . . where the blessings of Free Enterprise, Open Competition and Private Initiative no longer exist?

These are but a few of the post-war issues which America must squarely face today!

On the speed with which these issues are settled will depend the releasing of hundreds of marvelous new inventions to a waiting world.

Today many leading manufacturers are preparing for peacetime production of items which will raise America's standard of living to undreamed-of heights. In the plans of many of these the accuracy, quality and precision of Detroit Taps and Tools will have their appointed places. But the speed with which these plans unfold after the war will depend upon the cooperative effort of Industry, Labor and Government in making "the road back" short and smooth.

Send for your free copy of "Threads of Destiny," a new booklet tracing the development of the machine screw thread. Please make your request on your company letterhead.

DETROIT

TAP & TOOL CO.

8432 BUTLER AVENUE • DETROIT 11, MICHIGAN

LET'S ALL KEEP BACKING THE ATTACK - Buy More Bonds

GROUND TAPS • GROUND THREAD HOBS • THREAD GAGES • SPECIAL THREADING TOOLS AND GAGES

ment in improved plant and equipment, and ingenuity in making better use of the tools which invention and investment have provided.

Nor have the railroads come to the end of the road in this sort of progress. On the contrary, more concentrated thought and energy are being devoted to methods of improving the quality and cutting the cost of production in the railroad "factory" than ever before. Railroad research is being done in laboratories, plants and on the road all over the country, by railroads, railroad supply houses and cooperating universities and individuals. Through the nearly 200 technical committees of the Association of American Railroads, and its special Railroad Committee for the Study of Transportation, the results of all this research are brought together and made available to all interested railroads.

Complicated mechanism

A RAILROAD is a machine of many parts—road-bed and other fixed plant, signals and communications, shops and offices, as well as cars and engines. It is manned by men of many differing trainings and qualifications. Changes in any part of the machine may, and usually do, affect other parts, so that development must be carried forward on a broad front.

Bigger engines, for example, may pull heavier trains and pull them faster, but they may also require heavier track, stronger bridges, improved shop layouts, perhaps a different signal lay-out, and changes in other parts of the machine.

The foundation of this machine is the track. The track of the future will be made of stronger and tougher steel, with better joints and fastenings. It will be drier and better drained, will have lighter grades and lesser curvature. It will cost less to maintain per ton-mile of traffic passing over it, and, where that is of consequence, will make possible higher speeds and heavier trains—in other words, more intensive use of plant.

Over this track there will continue to run trains—the railroad train being a composite vehicle made up for a particular journey by putting together separately loaded cars to be hauled as a unit, and, at destination, to be dispersed for separate and individual unloading. This combination of the flexibility of the single car with the economy of mass movement, being peculiar to railroads and fundamental in their operations and in the commerce of the country, will continue.

Cars in the trains will be lighter with an increased proportion of pay-load and a decreased proportion of dead-weight. The change in this direction will not be so great as is sometimes suggested—because even now the average freight car has a carrying capacity of from $2\frac{1}{2}$ to three times its own weight. The discrepancy between capacity and average load, which is sometimes cited, is due in





PATENT APPLIED FOR

RELAXATION AND FREEDOM FROM TRAVEL FATIGUE are the gifts of new design in this magnificent sleeper-coach. Reaching new standards of luxury and restfulness in low-priced accommodations, this long-distance coach of tomorrow will allow complete relaxation by day and sound sleep at night.

THE NEW *Day-Nite SLEEPER-COACH*

CHAISE LOUNGE COMFORT ON WHEELS

Pullman-Standard's latest travel innovation

This new dimension in coach comfort is achieved by superb seating facilities designed with low-angle reclining adjustments that support the whole body while you relax at full length. For added privacy, movable curtains will screen your space from the lights and sounds of the rest of the car, while permitting you to read under a focalized light without disturbing your neighbor.

Individual dressing rooms—spacious, modern, and well equipped—will eliminate congestion. Unneeded baggage will be checked into a new, out-of-the-way storage compartment to relieve over-crowded baggage racks and cluttered aisles.

Care for passenger comfort has also included many unseen engineering features . . . smoother riding at high speeds, improved braking and coupling, healthful air-conditioning, cleanliness en route, and sound-deadening. They all add up to a high expression of travel pleasure in safe equipment marked with the prestige of Pullman-Standard design.

★ ★ ★

Soundly engineered and designed, plans for this and many other types of advanced postwar railroad equipment are being shown in Pullman-Standard's Engineering and Research exhibit. They demonstrate how amply we are prepared to meet transportation's requirements as soon as construction of cars is again permitted. This is one of Pullman-Standard's contributions to the problem of postwar reemployment.



The adjustable screens give you added privacy, and restful sleep is made possible because these newly-designed reclining chairs support the whole body and eliminate leg fatigue.



Illustrated above is one of the private dressing rooms; all models of scientific planning, equipped with broad mirrors, ample lights and complete comfort facilities.

Pullman-Standard
CAR MANUFACTURING COMPANY
CHICAGO • ILLINOIS

World's largest builders of modern streamlined railroad cars
Offices in seven cities . . . Manufacturing plants in six cities

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Some 22,000,000 people in all walks of life hold Prudential policies. Size, kind and payment plan can be fitted to your own circumstances.

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MORFLEX COUPLINGS FOR MANY USES

Without lubrication Morflex Couplings operate at top efficiency... resist shock and vibration because resilient rubber trunnion blocks are assembled under pressure in the center unit. Q Dust and dirt can't interrupt their trouble-free performance. Q Compact and quiet, designed for dependability on any type of installation. Morflex couplings combine all these features. Q Consult your Morse engineer.

SPROCKETS

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CLUTCHES

MORSE *Roller and Silent* **CHAINS**

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large part to variations in the weight-density of commodities to be loaded—nobody could put 100,000 pounds of straw hats in a 100,000 pound capacity box car—and in part to commercial conditions and practices.

During the war, great progress has been made through the cooperation of shippers organized in The Shippers Advisory Boards, and the assistance of the ODT in accomplishing more complete loading of cars.

The freight car of the future is not likely to be much more elaborate or costly than the present car. There is an economic limit to what may profitably be spent on a vehicle which necessarily spends about half its time in the hands of shippers and receivers of freight and a goodly part of the remaining time being switched or awaiting movement. They will, however, have better trucks, better draft gear, better springing and shock-absorbing arrangements.

Diesel-electric engines will come into wider use, both in switching and road-haul service. Very heavy traffic or especially difficult operating conditions will probably bring further extensions of central-station electrification, where each engine on the road has at its command all the power of the powerhouse. Steam-turbine engines, and a gas-turbine in which the products of combustion go directly to work whirling the blades of the turbine, are in prospect.

Steam engines improved, too
ALL this while, the reciprocating steam engine, which is the backbone of the railroad power fleet, is not standing still. Higher steam pressures and temperatures, better steam-making and distributing arrangements, lighter rods, pistons and other reciprocating parts, new and more flexible wheel arrangements—all are in the making.

There will be wide extension, especially on busy single track lines, of centralized traffic control whereby one man sets the switches and displays signals for the movement of all trains over a division of 100 or more miles. This idea of keeping trains rolling will bring more terminals with one-direction yards where the cars of a train received at one end are pushed over the "hump," to roll down hill along routes set up by a towerman who controls their speed and stopping places.

Signals will be improved and two-way radio more widely used both on trains and in terminals, less as a safety measure than as a means of reducing delays and waits for information.

Railroad men are asked more frequently, however, about the passenger travel of the future. The lines of its development had already been projected before the war—some increases in speed, though accomplished more by steady movement than by bursts of extreme spectacular speeds; great increases in comfort through further improvement of the air-conditioning in which railroads pioneered; better seating and lighting arrangements in bet-

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ter riding cars; the provision of individual-room privacy in sleeping cars at a price little above that of the open-section berth, through the duplex-roomeette car built by Pullman just before the war; and the development of lower-cost sleeping car transport through the three-deck cars likewise put into experimental service by Pullman just before the war started.

Thus, the coach of the future, and sleeping cars of two new and distinctly different types, are already in service. After the war there will be more of them, with improvements in detail suggested by that part of the public which has had a chance to test them out.

These, and other improvements in service and operations, will be the railroads' answer to the problem of meeting rising costs and taxes out of selling prices which do not go up.

The railroads expect to keep on hauling freight and passengers—not so many, probably, as now, but their share of what there is to haul. They hope that a public, which has seen in this war the great need of railroads, and the tremendous accomplishments of which railroads are capable, will also see that they are not hampered in their future contributions to the life of the country by laws and policies which add unnecessarily to their costs, or take away uneconomically from their revenues.

The railroads intend to keep on doing the job for which they are supremely suited, and one that is within the limits of their demonstrated capacity and ability—producing the major portion of the essential transportation on which the commerce and life of this continent depend.

Storage Batteries, Shipped Dry

A NEW development in storage batteries makes possible their shipment with water and acid to be added at the point of use. Batteries thus treated retain 75 per cent of the original charge after being in storage for more than a year.

Shipment with liquid acid included often resulted in spillage. Gradual loss of the electrical charge was also expected so that regular recharging was required of batteries in storage. Freight charges were higher because of the weight of liquid.

The principal change is a microporous, wafer-thin rubber which is replacing wood as plate separators. Unlike wood, it will not buckle should the acid solution become low or expended. The battery industry considers buckling of wood separators as the prime reason for battery failure. The rubber is expected to outlast wood at the rate of five to one. The rubber separators are designed to outlast the battery.

They were developed by the United States Rubber Company. This rubber has millions of tiny cells per square inch.

INSURANCE CALENDAR



OCTOBER

On October 9, 1894, movies had their world premiere when the first commercially shown motion picture (*Miss Jerry*) was put on in New York. The same year, Underwriters' Laboratories, Inc., was sponsored by leading capital stock fire insurance companies to develop methods of fire prevention. Both have contributed much to living. Without movies, certainly, life would be a lot less pleasant; without Underwriters' Laboratories, it would certainly be much more hazardous.

1944—OCTOBER hath 31 days

"The right to vote was not easy to come by—exercise it!"

ASTRONOMICAL CALCULATIONS					
EASTERN STANDARD TIME					
OCT.	Latitude +30°		Latitude +35°		
	SUNRISE	SUNSET	SUNRISE	SUNSET	
1	5:53	5:46	5:54	5:44	
6	5:56	5:40	5:58	5:37	
11	5:59	5:34	6:02	5:31	
16	6:02	5:28	6:06	5:24	
21	6:05	5:23	6:11	5:18	
26	6:09	5:19	6:15	5:12	
31	6:13	5:14	6:20	5:07	

OCT.	Latitude +40°		Latitude +45°		
	SUNRISE	SUNSET	SUNRISE	SUNSET	
1	5:56	5:43	5:58	5:41	
6	6:01	5:35	6:04	5:32	
11	6:06	5:27	6:10	5:23	
16	6:11	5:20	6:17	5:14	
21	6:17	5:12	6:23	5:06	
26	6:22	5:05	6:30	4:58	
31	6:28	4:59	6:37	4:50	

OCT.	Latitude +50°		Latitude +55°		
	MOON-RISE	MOON-SET	MOON-RISE	MOON-SET	
1	5:50	5:08	5:53	4:58	
3	7:12	7:21	7:03	7:28	
5	8:40	9:34	8:20	9:53	
7	10:18	11:38	9:53	12:03	
9	...	1:23	11:41	1:49	
11	12:59	2:49	12:37	3:09	
13	2:47	3:59	2:33	4:10	
15	4:31	5:12	4:28	5:03	
17	6:16	6:05	6:22	5:56	
19	8:04	7:14	8:21	6:56	
21	9:58	8:39	10:21	8:15	
23	11:50	10:25	12:16	10:00	
25	1:32	1:54	1:20	1:56	
27	3:01	3:15	3:13	1:20	
29	4:22	3:49	4:22	3:46	
31	5:44	6:05	5:32	6:15	

To obtain local times of sunrise and sunset: for longitudes other than the standard time meridians (i.e., 75°, 90°, 105°, and 120°, for Eastern, Central, Mountain, and Pacific Standard Time), decrease the time four minutes for each degree east of the standard meridian, or increase the time four minutes for each degree west of the standard meridian.

OBSERVATION for October: With the building cost index about 56 points higher today than it was in 1940, you ought to consider buying additional property insurance to bring your coverage in line with present-day replacement prices.

MORAL for October: Your Agent or Broker will know whether or not you need it—see him today!

PROPERTY INSURANCE
Fire-Automobile-Marine

FIRE ASSOCIATION GROUP

Fire Association of Philadelphia
The Reliance Insurance Company
PHILADELPHIA

Lumbermen's Insurance Company
Philadelphia National Insurance Company
PENNSYLVANIA
SYMBOL OF SECURITY SINCE 1817

69



When the demand is hot for *Stoves—not Flame Throwers*

AFTER the war is won, America is looking forward to a great new age of building — to supply billions of dollars worth of goods that people want and need — to supply millions of jobs our returning boys must have.

But first, industry must re-convert to peace production — in a race against time. And in this race, AIR EXPRESS will continue to save the nation millions of work-hours through the high-speed delivery of critical tools and material — with a greatly expanded service that business will use with economy in world markets as well as at home.



SPECIFY AIR EXPRESS A Money-Saving, High-Speed Tool For Every Business

With additional planes and space available for all types of traffic, 3-mile-a-minute Air Express directly serves hundreds of U.S. cities and scores of foreign countries. And shippers nationwide are now saving an average of more than 10% on Air Express charges — as a result of increased efficiency developed to meet wartime demands.

WRITE TODAY for "North, East, South, West"—an informative booklet that will stimulate the thinking of every executive. Dept. PR, Railway Express Agency, 230 Park Avenue, New York 17, N.Y., or ask for it at any local office.

AIR EXPRESS
AIR EXPRESS
Gets there FIRST

Phone RAILWAY EXPRESS AGENCY, AIR EXPRESS DIVISION
Representing the AIRLINES of the United States

Help Wanted for the Postwar Risk-takers

(Continued from page 30) **g**est holding company in the world. It would be the arbiter of life and death to innumerable enterprises.

2. The only private enterprises that might possibly be able to retain their identity would be the so-called big businesses, and only so long as they required no additional working capital.

3. Not only would private enterprise be endangered but labor itself would become the servant of the state.

It is not anticipated, however, that the Government will set up a national lending agency to hand out capital to business firms.

A tax law for peace

CONGRESS plans to revise the tax system after the war and thus give private capital greater incentive. Says Congressman Robert L. Doughton, chairman of the House Ways and Means Committee:

"When the war ends, we want to curtail tax burdens on individuals and corporations. But," he adds, "before we write a detailed tax law we first have to have some idea of what the postwar federal budget will amount to, an estimate of the peace-time national income, and an idea of the amount that would be raised by the present rates."

The Twin Cities group feels that it is a mistake to wait until the war is over to pass a new tax law:

"Enact into law as soon as possible a new tax program which would become effective in its entirety at the cessation of hostilities. That would enable business to plan its postwar course now. It would result in a speedy and orderly resumption of peace-time operations and employment."

"To make it possible for those with reserves and surpluses to invest in venture enterprises and to receive profits adequate to cover the risks taken, provided the ventures are successful," the Twin Cities Plan recommends:

1. Repeal of excess profits tax, capital stock and declared value excess profit taxes, as well as the two per cent penalty imposed for filing consolidated corporate returns, together with tax on intercorporate dividends.

2. Substantial reduction of individual income tax rates, even though doing so means retaining currently high wartime normal and surtax rates on corporations, ranging up to 40 per cent.

3. Exclusion from gross income of 40 per cent of dividends received by individual stockholders from domestic corporations.

The taxpayer would report 60 per cent of such dividends received and pay the

tax called for in his own individual income tax bracket.

A copy of "The Twin Cities Plan" may be obtained free by writing Twin Cities Research Bureau, Inc., 332 Cedar Street, St. Paul 1, Minnesota.

From the National Planning Association come other specific recommendations for revising our tax system. A plan outlined in a pamphlet called "Fiscal and Monetary Policy," prepared for the Association by Beardsley Rumel and H. Christian Sonne, proposes that:

1. Federal income taxes on corporations should be abolished, provided measures are at the same time adopted to prevent the use of the corporate form as a device (a) to avoid payment of individual income taxes and (b) to secure undue tax advantages over partnerships and unincorporated businesses.

2. The graduated progressive individual income tax should be relied on as the chief source of income. Substantial reduction from present rates is both possible and desirable.

3. No general sales tax should be imposed.

A copy of "Fiscal and Monetary Policy" may be obtained by writing National Planning Association, 800 Twenty-first Street, N. W., Washington 6, D. C., and enclosing 25 cents.

Still another program has been put forward by the Committee for Economic Development. It proposes:

1. Some reduction of individual income taxes, while retaining this tax as the major source of federal revenue.

2. Elimination of duplicate taxation of dividend income by providing for a corporate net income tax at the same rate as the individual normal tax (proposed normal rate 16-20%, depending on revenue requirements), with dividends exempt from individual normal tax but subject to surtax.

3. Taxation of income from all future security issues by state and local governments.

4. Capital gains and losses to be treated the same as other income and business losses.

5. Repeal excess profits tax and capital stock and declared value excess profits tax.

6. Repeal federal excise taxes except those on liquor, tobacco and possibly gasoline, and those levied for social or regulatory purposes.

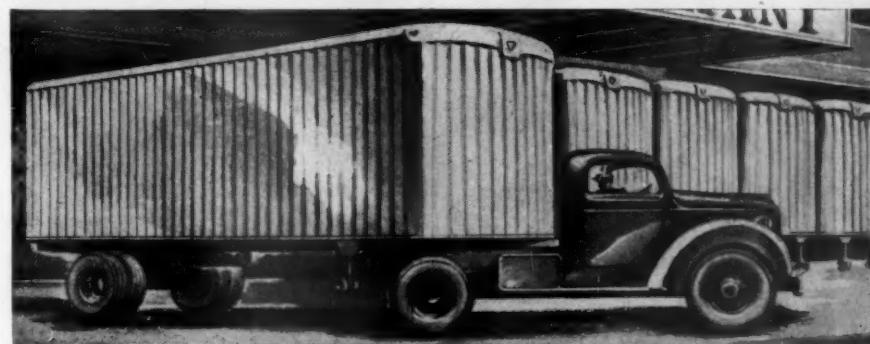
A copy of this plan may be obtained without charge from Committee for Economic Development, 285 Madison Avenue, New York 17, New York.

When peace comes, Congress will revise our tax system, adopting at least some of the sound recommendations now being made by business men.

As the Chamber of Commerce of the



1. Trailers rush invasion cannon into action. Other trailers move up communications units, munitions, and machinery to wreck enemy installations... to help our troops dig in, faster! Trailmobile makes thousands of military trailers.



2. Our home trailer fleets support War Transport—continuously. Delivering millions of tons of civilian supplies—millions more of war equipment, destined for distant fronts. Trailers link all points on our continental highway network.

AAA-O ANYWHERE, ANYTIME, ANYHOW—BAR NOTHING!



Our Yanks paint this fighting symbol on their helmets.

It might also be the motto of our Army Transport on every front... moving forward men and equipment anywhere, anytime, anyhow—bar nothing!

Military trucks and trailers pick up entire armies—transport them over enemy-sabotaged

roads, across battlefields, through jungles, deserts, over mountains—get them on the double-quick to where they are needed!

At home, trailers are doing an unspectacular job just as vital to winning the war, moving materials from any point on our road map to any of thousands of destinations. Home Transport has performed wonders with too few trailers, men, spare parts.

Now Relief Is Here—New Trailmobiles

► To help ease the strain on our overworked Home Transport, recent Government allocations permit the manufacture of several

thousand new commercial Trailmobiles. Trailmobile is producing its full allotment with no let-up in production for our Armed Forces.

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Set either factor of any Multiplication problem on the Keyboard. Then enter

the other factor in the Multiplier. For either Positive, Negative or Accumula-

tive Multiplication just touch ONE KEY...and presto, the Carriage is automati-

cally positioned, the Dials automatically cleared, the Calculator automatically

counts and shifts until the problem has been completed...then finally clears

the Keyboard preparing the machine for any subsequent calculation.

Friden Calculators are AVAILABLE when applications for deliveries have

been approved by the War Production Board. Telephone or write to your local

Friden Representative for complete information.

Friden Mechanical and Instructional Service is available in approximately 250 Company Controlled Sales Agencies throughout the United States and Canada.

FRIDEN CALCULATING MACHINE CO., INC.

HOME OFFICE AND PLANT • SAN LEANDRO, CALIFORNIA, U.S.A. • SALES AND SERVICE THROUGHOUT THE WORLD

United States sees it, every tax barrier, which impedes the flow of enterprise capital and prevents the making of new jobs, should be removed as early as possible.

Our country will not pass suddenly from war to peace. The transition will be gradual—from a big war to a smaller war and then to no war—from heavy war expenditures to lighter and lighter war expenditures.

Each transition period will perhaps require a tax program of its own designed to fit the conditions of that particular period.

The National Chamber recognizes that, only by being eternally vigilant, by keeping in constant touch with the current situation, studying conditions as they arise from day to day and week to week—and then working closely with Treasury officials and the lawmakers—can business help stave off "inevitable unemployment."



One-Man Stretcher

The Canadian Army has introduced a new sled-type stretcher with which one man—utilizing a tump-line—can evacuate wounded, either by carrying the stretcher as shown here or by crawling and pulling it after him.

The tump-line has been a favorite packing device of North American Indians for hundreds of years. It consists of a leather band which fits across the forehead and is attached to a packboard with shoulder harness. The weight of the load is distributed on the back and neck muscles.

It is claimed that the tump-line method is less fatiguing than usual methods of carrying heavy loads on the shoulders.

The Canadian Army uses it not only for evacuating wounded but also for packing in supplies, heavy machine guns and mortars in amphibious and jungle operations.



"But, Doctor, can't you get here sooner?"



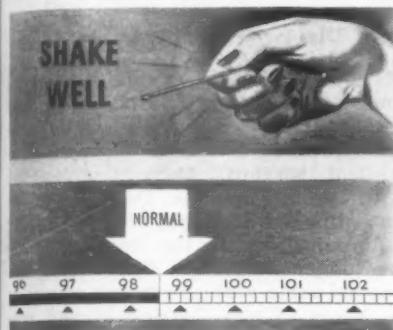
DO YOU KNOW what to do for illness or accident before the doctor comes?

It's mighty important these days. Doctors are busier than ever and often can't come the minute they are needed.

So it's up to you to know elementary first aid and the most common signs of disease.

Most of all, of course, you can help yourself—and your doctor—by keeping well. And if any unusual or persistent condition develops, consult your doctor *early*. You will save your time and his.

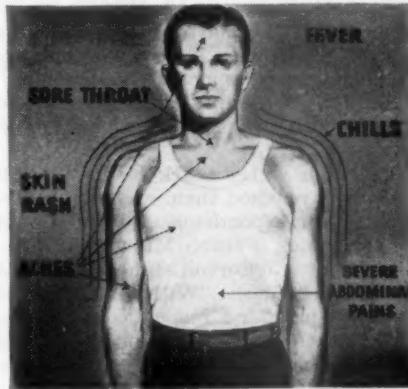
Meanwhile, check up on the important points below.



1. Can you take a temperature?

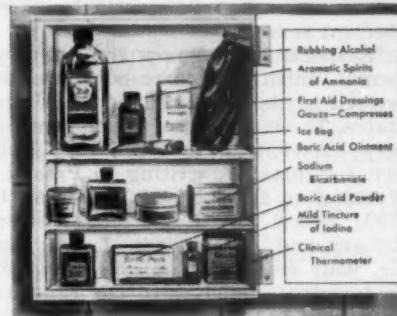
Fever thermometers are easy enough to use. The mercury should be well shaken down. Leave thermometer under tongue at least three minutes.

Normal is 98.6°. Any person with a temperature much above this level probably needs medical attention and should go to bed.



2. What are common danger signs?

Sore throat...skin rash...chills, fever and aching...persistent or severe abdominal pain are often signals that precede a real illness. If one or more of these symptoms are present, it's best to consult a doctor.



3. Do you really know first aid?

That first aid course you once took won't do you much good in an emergency unless you *still* know it. Why not brush up on the Red Cross First Aid Manual? Metropolitan's booklet, "First Aid," is helpful, too.

Don't neglect your medicine cabinet. It's good to check regularly to see that it's fully equipped.



4. Can you treat shock?

First, lay the patient on his back. Second, keep the patient comfortably warm. Third, if the patient is conscious, give a stimulant—a teaspoon of aromatic spirits of ammonia in half a glass of water, coffee, or tea. If unconscious, let him breathe aromatic ammonia or smelling salts.

CAUTION: Do not give stimulant while patient is bleeding severely, if he has a head injury, or a strong pulse and red face as in sunstroke.



5. Do you know how to call a doctor?

If it's illness, the doctor wants to know signs and symptoms as accurately as you can tell him, how long they've lasted; the patient's temperature.

In case of an accident, describe the injury; what you've done; the victim's apparent condition.

With the help of your intelligent description, the doctor can offer suggestions, decide how urgently he's needed, and foresee what equipment he will need.

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Metropolitan Life Insurance Company

(A MUTUAL COMPANY)

Frederick H. Ecker,
Chairman of the Board
Leroy A. Lincoln,
President



1 MADISON AVENUE, NEW YORK 10, N. Y.

TO EMPLOYERS:

This advertisement might help your employees maintain better health on and off the job.

On request, Metropolitan will gladly send you enlarged copies of this advertisement for posting on plant and office bulletin boards.

"Your Obedient Servant"

By MAUD M. HUTCHESON

IT'S a far cry from "Your Excellency's most obedient and most humble servant" to "Very truly yours". The nation was nearly a century and a half traveling the full distance between these two complimentary closings for official and formal communications. The "humble" was the first to be relinquished, then the "mosts" were eliminated, and some years ago "Very truly yours" was elevated to the place long held by "Your obedient servant."

"Respectfully" is now the approved formal finish for correspondence addressed to the President of the United States. The language of officialdom was very different in by-gone days. John Jay, for instance, writing to President Washington from New York, June 13, 1790, closed "With perfect Respect, Esteem and Attachment, I am, Dear Sir, your most obdt. & hble. servant." To terminate a letter to Dr. Franklin, November 3, 1786, General Washington wrote, "I am, as I hope you will always believe me to be, with the greatest Respect and Esteem, dear Sir, your Excellency's most obedient and very humble servant."

"I have the honor to be . . ."

ALIKE in public and private life the great ones of long ago rang interesting changes on this dignified theme. When Washington offered the Secretaryship of State to Jefferson in a letter, October 13, 1789, he finished "With sentiments of the greatest esteem and regard, I have the honor to be, Sir, your most obedient servant."

In a short note, March 29, 1791, transmitting some papers to Thomas Jefferson, Esquire, the President's private secretary subscribed himself, "I have the honour to be, with the most respectful attachment, Sir, your obedient, humble servant, W. Jackson."

Judging from his official correspondence Jefferson was as formal as any of his colleagues. To the President, on the question of a rise in the price of copper, he wrote from Philadelphia, November 28, 1792, "I have the honour to be, with the most profound respect and attachment, Sir, etc." To General Greene, January 12, 1786, "With sentiments of the most perfect esteem and respect, dear sir, your most obedient and most humble servant;" to Madison, February 8, 1786, "With a lively

esteem, dear Sir, your sincere friend and servant," and his request to John Adams, February 6, 1786, was "Be assured of the esteem with which I am, dear Sir, your friend and servant."

Jefferson also liked to "salute" certain of his friends. Writing to Fulton on the absorbing topic of torpedoes, he closed, "Sir, I salute you with great respect and esteem." A letter to Robert J. Garnett, February 12, 1824, in which he went into the matter of amendments to the Constitution ended, "Accept my friendly and respectful salutations," while Dr. Benjamin Rush was asked simply to "Accept my affectionate salutations."

The high water mark of formal address was reached then, as now, in diplomatic correspondence. To the Count de Vergennes, French Minister of Foreign Affairs, Jefferson signed his name below this flourish: "With sentiments of the most profound respect and esteem, your Excellency's most obedient and most humble servant." When John Jay had occasion to treat with the Right Honourable Lord Grenville, one of his Majesty's principal secretaries of state, he wrote from Pall Mall Royal Hotel, July 3, 1794, "With very sincere respect and esteem, I have the honor to be, my Lord, your Lordship's, etc." Jay, however, was almost as formal with Tom Jefferson. In a letter of a few lines, merely forwarding enclosures he had "the honor to be, with great respect and esteem, Sir, your most obdt. & hble. servant." Today, an American ambassador sending despatches from abroad to the

Department of State is just, "Yours respectfully," but the Secretary of State closes a communication to a foreign diplomat more elaborately. A note to an ambassador finishes "Accept, Excellency, the renewed assurances of my highest consideration," and a minister of foreign affairs is given "distinguished" consideration, with the same phrasing.

"In haste, Yrs. affte."

INTERESTINGLY enough, the governor of a state is one official in the United States to whom a correspondent still has "the honor to be, Sir, your obedient servant." According to the Style Manual of the Department of State, this is the formal mode of ending communications to the honorable, the governor, of any state. The ending has dropped some verbiage in the course of the years. When Patrick Henry was governor of Virginia, Jefferson wrote him, January 24, 1786, "I have the honour to be, with sentiments of the highest respect, your Excellency's most obedient and most humble servant."

Even in the black days at Valley Forge Washington did not lower epistolary standards. "I am, dear Sir, with great esteem and regard, your much obliged friend," he signed to Patrick Henry, March 27, 1778, and Henry begged that General Washington "Be assured of that high regard and esteem with which I am, dear Sir, your affectionate friend and very humble servant."

It was only on a rare occasion that these great men unbent sufficiently to be sincerely yours and so it is refreshing to find that Patrick Henry could be "In great haste, Yrs. affte." when he wrote to Light Horse Harry Lee, also that the nation's first Secretary of War could write from West Point, Feb. 21, 1783, to my dear (Gouverneur) Morris, and finish "Your affectionate, H. Knox." To Gouverneur Morris, who addressed him simply as "Dear General," Washington's reply was, "Adieu, I am Most sincerely yours."

While it is still customary for subjects of a sovereign to "have the honour to remain, Sir, Your Majesty's most humble and obedient subject," in formal address it is permissible, indeed customary, for an American citizen to subscribe himself, "I have the honour to be, Your Majesty, respectfully yours."



"Looks like that operator has hiccoughs again!"

Does this affect you?

YOU'VE been paying close attention to the tax item in the current liabilities of your business, and you know exactly how much money is held for future tax payments.

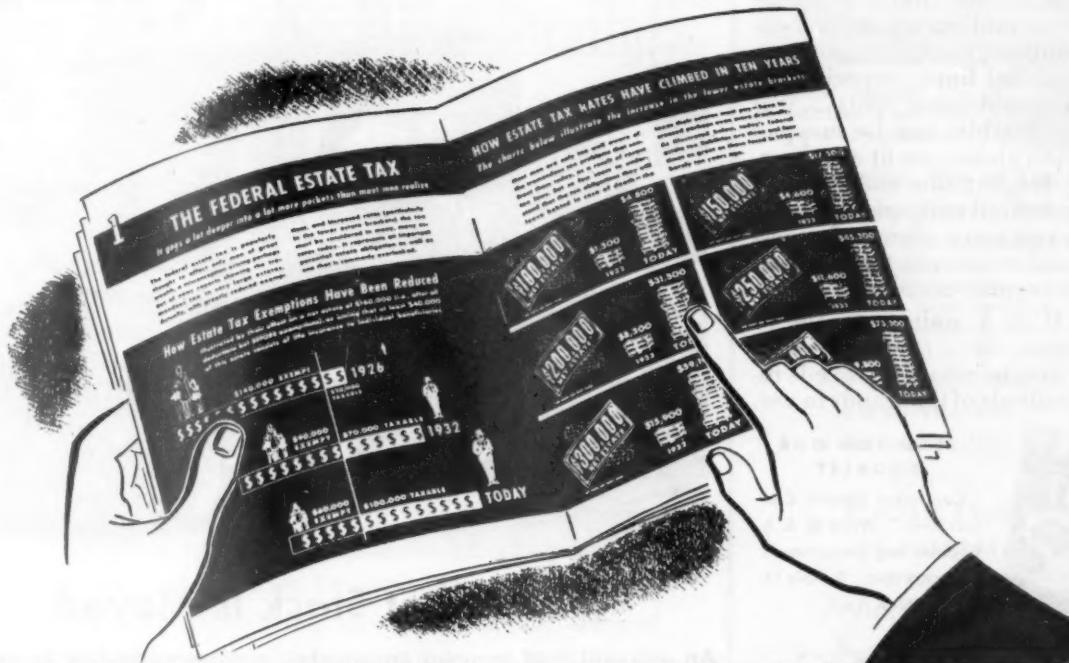
But have you measured the rise in estate taxes and how much cash may be needed by your heirs to settle your estate?

This is a question that is frequently overlooked by men of means in these busy wartime days. And it sometimes means terrific sacrifice for the very people a will is drawn to protect.

For example, a recent survey of estates probated from coast to coast revealed that the

demand cash needed for estate taxes and other administrative expenses amounted to 18% to 54% of the estates studied.

There are many advantages in offsetting tax and administrative losses to an estate with life insurance. More and more business leaders are using this money-saving way. May we suggest a first step?—Send for the latest edition of our booklet "Have You Streamlined Your Estate?" It briefly and graphically describes what has happened to estate taxes and what you can do to prepare your estate to meet them.



1857 1944

The Northwestern Mutual

Life Insurance Company

MILWAUKEE 2, WISCONSIN

The Northwestern Mutual Life Insurance Company
Milwaukee 2, Wisconsin

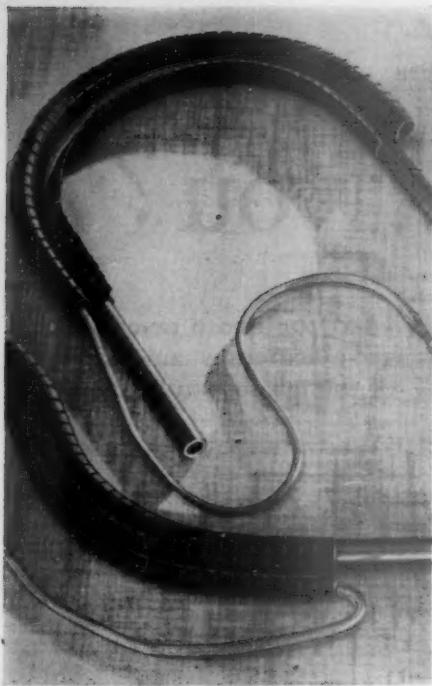
Gentlemen:

Please send me a copy of your booklet, "Have You Streamlined Your Estate?" This places me under no obligation.

NAME _____

ADDRESS _____

CITY AND STATE _____



How we make **HEAT** RUN

AROUND IN CIRCLES

This H. & A. unit literally makes heat run around curves, bends, circles. On military vehicles it prevents freezing of fuel lines—especially at the most troublesome spots... it is extremely flexible; can be snapped quickly into place; can fit any diameter, any length; can maintain exactly any desired temperature—and therefore can serve scores of peacetime uses where viscous fluids, chemicals, oils require accurate heating.

Other H. & A. units are made in many shapes, sizes, contours—one of which may be what your needs require. Hundreds of thousands in use.



SEND FOR OUR BOOKLET

"Controlled Electric Contact Heat." Write H. & A. Engineering Department, 88 Leroy Ave., Buffalo 14, New York.



In nearly any shape, size and capacity



How Big is Reconversion?

(Continued from page 26)

and employment, with the possible addition of products new to the industries which will supplement their other products for commercial or pleasure use.

The same is true of the small-arms, munitions and explosive manufacturers.

Others with no particular reconversion problems, but which may have to curtail employment from wartime levels, are the clock and watch, screw machine product, iron, wire and wire cloth, non-ferrous metal product, radio equipment and parts, and bolt, nut and rivet manufacturers.

Some durable goods industries have practically no reconversion problem and will employ more workers as soon as they become available. These include the building equipment and supplies (warm air heating and air conditioning); furniture; iron and steel, foundries, rolling mill machinery, steel barrel, lumber and stone, clay and glass products, and plastics.

For the most part, manufacturers of non-durable goods face no reconversion

problems and practically every one of them has been operating short-handed. It can be safely assumed that the bedding, clothing, drugs, soap, beverage, food and dairy products, meat packing, sugar, grinding wheel, paint and varnish, paper and petroleum products, printing and publishing, rubber products, shoes and leather, textile, and tobacco product industries will all need workers.

The distillers and chemical product manufacturers will no doubt lay off a small number of workers.

So much for manufacturers. As for the rest of the nation's business, very little reconversion is necessary:

Agriculture will be placing emphasis on different crops than now. The Government has guaranteed fair prices for two years after victory. There is great need for new construction and farm implements, for repairs to buildings and machinery, none of which can be made until lumber and other items become available. Current labor shortage will



Giant Stack Is Moved

An unusual feat in motor transportation history was chalked up at Philadelphia recently when a tractor-semitrailer unit completed a 60-mile trip from Allentown with a 20-ton smoke stack 24 feet wide and 18 feet high in carrying position.

This piece of equipment was so large that entire trees had to be cut down, branches of others had to be cleared,

and wires had to be raised or disconnected in order to let it through. The movement was a complicated engineering problem involving hauling experts, utility company technicians, police, and traffic authorities.

The giant stack was transported by J. H. Beers, heavy hauling expert of Bangor, Pa., using a White Super Power COE tractor and a drop-frame trailer.

What do you suppose
it is...anyway...?

DUNNO!



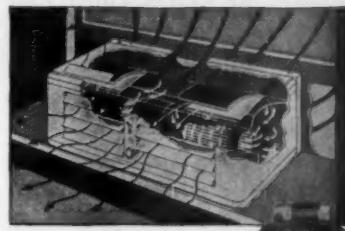
Meet an Early Ancestor of the Air Conditioning Family!

No, this picture wasn't made in the Smithsonian Institute. It is reproduced from Emerson-Electric advertising of 1906 and illustrates an early window-type air conditioning unit.... Driven by an Emerson-Electric motor, it was claimed that "this outfit removes all particles of dust and dirt by causing the air to pass through water, making the air breathed pure and wholesome."

Further, it was stated that Emerson-Electric "will cooperate with any manufacturer building machines suitable for operation by small alternating or direct-current motors".... This statement is much more significant today because—

Backed by 54 years' experience in the design and precision manufacture of electric motors, Emerson-Electric is prepared to render invaluable engineering service to manufacturers of appliances and equipment requiring motors up to 5 H. P.

405
THE EMERSON ELECTRIC MFG. CO. . . . ST. LOUIS 3, MO.
Branches: New York • Chicago • Detroit • Los Angeles • Davenport



Typical modern air-conditioning unit with Emerson-Electric motor.

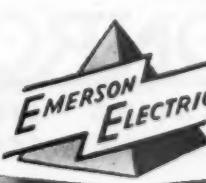
The American Way of Life is Powered by Electric Motors

As soon as materials are released for civilian use, Emerson-Electric motors will resume their jobs of driving many of the devices which contribute so much to the American standard of living—

AIR CONDITIONERS
REFRIGERATORS
WASHING MACHINES
IRONERS
ELECTRIC FANS
OIL BURNERS
STOKERS
FURNACE BLOWERS



EMERSON-ELECTRIC POWER-OPERATED
GUN TURRETS and ELECTRIC MOTORS FOR
AIRCRAFT contribute to Allied military might
on all battle fronts of the world.

EMERSON
MOTORS • FANS  ELECTRIC
APPLIANCES

"What a fix we'd be in without Monroes!"



They can really pitch in and do a job with a Monroe; its speed, its simplicity, its Velvet Touch ease of operation, all combine to make the day's work lighter—despite the unprecedented wartime volume of figures and records.

Payroll calculations and records; statistics; analyses; estimates; reports; invoices; costs and percentages; inventory and accounting procedures. Manage-

ment depends on these for efficient and economical administration; and business depends on Monroe to keep this vital work flowing.

Call the nearby Monroe branch . . . ask our representative about the availability of Monroe Machines under existing conditions. Let him help you to effect time-saving shortcuts. Ask about our Guaranteed Maintenance Plan to keep your Monroes in top operating condition.

• • •

Without obligation send for the Monroe Payroll Book showing simplified methods for figuring Overtime, Bonus and Tax Withholdings. A most valuable presentation of time-saving shortcuts on all payroll calculations. Get in touch with nearest Monroe Branch, or write Monroe Calculating Machine Company, Inc., Orange, New Jersey.



Monroe MA 7-W Calculator



Monroe 209-485-191 Accounting Machine

ease off rapidly as many of the 4,500,000 persons who left the farms during the war return to the land.

Construction is in for a tremendous lift just as soon as materials and labor become available. Airport facilities will have to be expanded and improved. Commercial, farm, industrial and residential buildings need repairs. There is a gigantic shortage of new homes. Drainage, and streets and highways have been neglected.

Finance, including banks, insurance and real estate, will experience increasing activity under less pressure, with the current shortage of help rapidly improving within the coming year.

Government pay rolls in most states, counties and municipalities will increase, and services, particularly education, greatly improve as both the armed forces and war industries release thousands of former teachers, firemen, policemen, engineers and sanitation workers. Federal employment probably will not be so large.

Mining, generally, will experience renewed activity as the labor shortage becomes less pronounced. Extraction of crude oil, precious metals, natural gas, non-metallic and quarry products will expand as men and materials become available.

Public Utilities will expand, particularly as to residential outlets, and there is need of new equipment and much repair work.

Service Industries such as amusements, auto repair, barber and beauty shops, business service and repair, hotels and tourists' camps, and miscellaneous repair will enjoy increasing business.

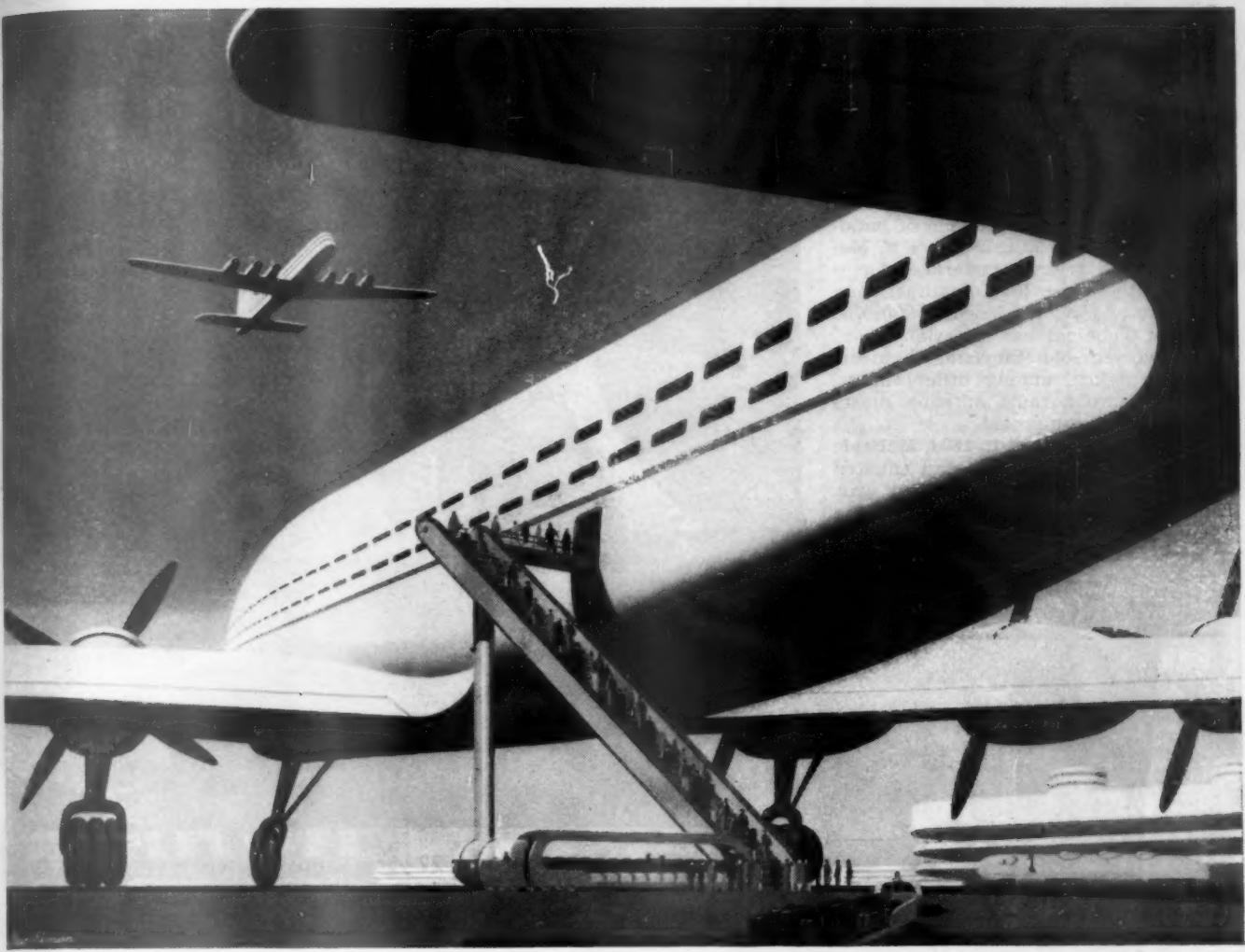
Trade, both wholesale and retail, has been operating short-handed and with limited stock. Tremendous expansion is in store for automobile, building supply, farm implement, gasoline and oil, tire, household appliance and radio dealers.

Transportation by air and steamship will increase sharply as facilities become available; while the railroad, bus and trucking business is expected to hold up for some time. The rolling stock of the last three services is in need of new additions and much repair. Many steamships will have to be reconverted to passenger use.

This brief peek at postwar business expectations demonstrates that the postwar reconversion problem is not general. The most seriously affected part of the durable goods industry has never employed as many as 5,000,000 workers.

But, since the entire peacetime economy depends on the products of the durable goods industry, reconversion, where it is a problem, is a very big problem, indeed.

MONROE
CALCULATING • LISTING
ACCOUNTING MACHINES



Finger-tip Control—for the TITANS OF THE SKIES

Across the roof-top of the world the champions of international air fleets will race for the supremacy of the skies. As great ocean liners contended with each other on the high seas for freight and passenger preference, so will the *de luxe* air liners of America vie with those of Europe for the traffic of the stratosphere.

Rivalry in size and speed, and in the visible aspects of comparison, may be close. Factors of service and comfort may be universally applied. But for their unseen, glamorous engine rooms, versatile units of Hycon hydraulic systems are now ready to do a score of jobs which mean greater efficiency, reliability, and economy in time and personnel.

This *booster force* of hydraulic power has many potential applications in aerial transportation. Already standard equipment on the Lockheed P-38 and the Douglas C-54, it has variable volume of pressure up to 3000 pounds per square inch. Specify HYCON Pumps and Valves, or complete Assembly Units for the hydraulic jobs in the coming Titans of the Air. Write for full information.

LET'S ALL BACK THE ATTACK—BUY MORE WAR BONDS

THE NEW YORK AIR BRAKE COMPANY

Hydraulic Division

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

For Industry's Postwar Uses

The compact high-pressure Hycon "Stratopower" pump, furnishing *variable volume at pressures up to 3000 pounds per square inch*—when no longer restricted by wartime needs—will do a great many hydraulic jobs better.

Out of the incredible demands of the war will come miracles of technological improvement to help rebuild a shattered world. More goods must be produced faster and cheaper. New machines will be created and old machines modernized. If you have a problem of actuation in your postwar plan, or the modernization of your present equipment, Hycon will help to solve it. Though our facilities are primarily devoted to production for the armed forces, there are still available for industry Hycon pumps and valves in the 3000-pound range. Write for full information.

*For Tomorrow—Infinitely variable
pressure controls at YOUR finger tips*

* * * **HYCON** * * *

High-Pressure Hydraulic Systems

Patented—Manufactured only by The New York Air Brake Company

From Bureau Chief to Industrialist

IN A miscellaneous collection of buildings in Pikesville, Md., William F. McBride, for 22 years a government employee without previous manufacturing experience, has produced \$4,500,000 worth of technical war material.

His two-year-old Maryland Engineering Co. makes, among other things, tubular plywood radio antenna masts and electronic equipment.

Born in the corn belt in 1894, McBride was introduced to radio as an enlisted man in the Navy during the last war. He shed the uniform in 1919 to become a civilian laboratory assistant at the



GEORGE LOHR

Navy Research Laboratory, and studied electrical engineering evenings.

By steady degrees he progressed through the Government until, when illness forced his retirement in 1942, he was assistant chief of the Signals Division in the Civil Aeronautics Authority.

Convalescence gave him leisure to consider where his best service might lie in the then young war. He felt that the knowledge he had gained in Civil Service had equipped him for a command in the Battle of Production.

The opening move was to rent an office in Baltimore and inform his acquaintances in the radio industry and government service by telephone. First fruit of this solicitation was an order to develop a wood chest to house radio equipment. The experimental chest was accepted and led to volume orders.

McBride, a country boy at heart, believes rural areas offer a better labor supply than cities. Accordingly, he



BLAKESLEE-LINE

William F. McBride, for 22 years a government worker and now a business success, and R. E. Heffernan (seated), his metal chief. Left: Testing the firm's plywood radio mast

leased a three-story brick building, formerly a general store in Pikesville, for a factory. That was soon outgrown, and the company spread across the road to a building occupied by a dog-and-cat hospital and a bowling alley. A hangar at the nearby Curtiss Airport

has since been taken on as a paint shop. The plant, rambling through its several buildings, now covers approximately 50,000 square feet of floor space.

The much advertised labor shortage and the problem of getting equipment have bothered this industrial amateur very little. In fact, both were solved in one motion at the outset.

Ray Murray, a Pikesville contractor, had woodworking machines and 18 skilled workers. The restrictions on home building had left him out on a limb talking to himself.

McBride said, "Come on in with us."

So he brought over his machines and men and became foreman of the woodworking department.

August Wohlmuth employed five men in a general repair and machine shop. He enlisted as foreman of the light metal department, bringing his workers, lathes, punch presses, a forge, and a genius for model building.

Oliver N. Sholtes brought in heavy metal working equipment, four men, and the "know how" for metal forming.

The company rents the equipment from the foremen-owners and guarantees to keep it in good repair. Thus, the project has developed as a cooperative enterprise and has kept three local, small businesses intact.

Around that nucleus, a force of about 200 has been gathered from various sources. Some of the faculty and advanced students of the McDonough School, a private vocational institution, put in part time as wood and metal workers. Manual training teachers come to the plant during vacations and holidays. Firemen, policemen, and other local residents come in for part time work when off duty.

To integrate this force and keep it ticking, McBride needed a good production manager. He found him in R. P. Trodler, nine years first mate on a trans-Atlantic liner, later a master rigger at a Baltimore marine works. Trodler's specialty in the new company is making cargo nets and slings, capable of lifting 372,000 pounds. These are used for hoisting locomotives, tanks and other heavy material on shipboard.

There have been no labor troubles.

"There is a good tavern a few doors down the road," McBride explains, "to

NO CUSTOMER
COMPLAINTS
... shipments move when
**MARSH STENCIL
MARKED**

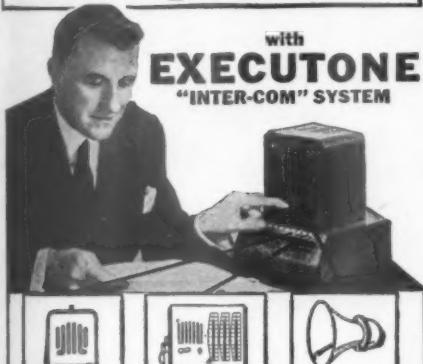
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Back the Attack—Buy More War Bonds!

which we adjourn at the close of business to settle any differences. We have a standing rule that no dispute may be carried over to the next day."

One typical bit of ingenuity was displayed when the firm needed a machine, not readily available, for bending heavy steel couplings. The pneumatic lifting apparatus from a defunct coal truck was salvaged and adapted to the operation. It works.

Two-thirds of the business has been radio antenna masts, mostly fabricated of tubular hardwood plywood. The other third has been largely military furniture, related to radio, such as desks, tables and cabinets, fabricated from plywood and metal.

The plywood masts range from a diameter of 2 1/4 inches by 30 feet in height to a diameter of 10 inches by 125 feet in height. One is designed to carry a load of 12,000 pounds at a height of 75 feet.

One of the masts is the portable job used for both reception and transmission in ground-to-plane communications. Flown to captured air fields, it can be erected by three men in half an hour.

Another interesting item is a portable radio direction finder antenna and shelter used for locating enemy radio stations or for giving bearings to planes or ships. The shelter is a demountable shack of plywood panels which can house two people and radio equipment.

McBride anticipates many civilian uses for the war products he is developing. He foresees, for instance, a large postwar market among radio "hams" for plywood antenna masts, also a market among boat lovers for light, sturdy, tubular masts designed to telescope for passing under low bridges. The building industry and novelties offer other promising fields.—ROBERT TURNER

Distributors to Meet

RECOGNIZING the importance of the distributive industries in providing more jobs during the postwar era, the Chamber of Commerce of the United States is sponsoring a distribution conference to be held at the Waldorf-Astoria in New York, Oct. 23 and 24.

The purposes of the conference are to provide more jobs in the postwar era; to serve the interests of the distributive industries; and to develop a better understanding of the economic needs of distributors.

Subjects to be discussed include reconversion and demobilization, disposal of government surplus property, price control and civilian supply, consumer credit, and taxation. The position of the retailer, wholesaler, manufacturer, financier, and the Government will be dealt with. Various organizations dealing with distribution will be represented.

Eric A. Johnston, president of the Chamber, will address the conference at a dinner meeting Oct. 23 on the subject "Distribution—a Key to Prosperity."

October, 1944

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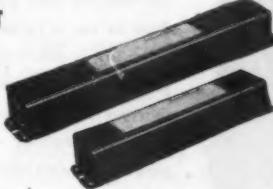
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An ancient Greek philosopher claimed that "pleasure was the only good." True or no, a ration of pleasure is every man's due. Among life's greatest felicities is the pleasure of smoking a VanRoy—the pipe with a noble heritage of distinguished quality—always preferred by the discriminating pipe smoker. VanRoy Company, Inc., Empire State Bldg., New York 1, N.Y.

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Cash by Card:

New "bondified" post card turns out to be something money order buyers want

UNLESS you happen to live in Minnesota, you may not yet have heard of Checks, Inc., a fast-growing little concern which markets a "bondified" post card check that can be bought for the same fee as other types of money orders and mailed anywhere in the U. S. or possessions for a cent.

Recently, reports Checks, Inc., the wife of a pharmacist's mate mailed one from Minneapolis to her husband. He cashed it on his ship somewhere on the Atlantic. It proceeded from the ship through a Navy station at Guantanamo Bay, Cuba, to a bank in Washington, to the Federal Reserve Bank at Richmond, Va., to the Minneapolis Federal Reserve Bank, and was finally honored by the Fidelity State Bank where funds for such checks are deposited.

Post card checks are now obtainable at hundreds of banks and drug stores. Made payable only to the person to whom addressed, the post card check is protected against tampering by federal postal laws. It is printed on a special safety paper that does everything but sound a siren if an erasure is attempted.

This post card plan is the brain-child of Elmer H. Dalldorf, president of Checks, Inc. He and his associates, H. C. Maag, vice president, and Glenn D. Moyer, secretary-treasurer, felt the need for such a service after conducting a year's survey.

For gifts and to pay bills

THE survey disclosed that 63 per cent of the people buy money orders at one time or another, that two-thirds of the purchases are made by housewives and that, in 85 per cent of the cases, the money orders are bought at the point most convenient to the buyer. In 22 per cent of the cases, the money orders are sent as gifts, the others to pay bills.

About 71 per cent of the people wanted the post card service, the survey showed, and asked the research representative where they could buy it, and if not obtainable, when it would be on the market.

The sale of these "bondified" checks through retail outlets like drug stores is undertaken through a licensee. In Minnesota the licensee is Currency Services, Inc., whose officers are all active druggists of Minneapolis. Checks, Inc. is now lining up other licensees all over the country.

Under its agreement with Checks, Inc., Currency Services maintains a substantial free balance in an earmarked bank account, and money orders issued by agents are checks against this account. Funds in the account cannot be withdrawn in any manner except by ap-

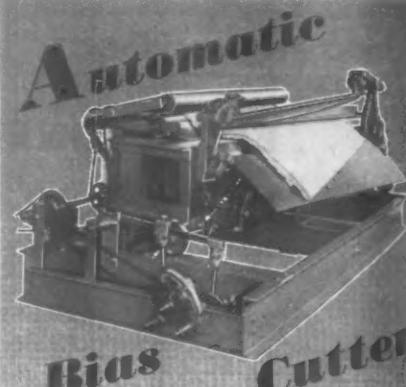


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Bias Cutter

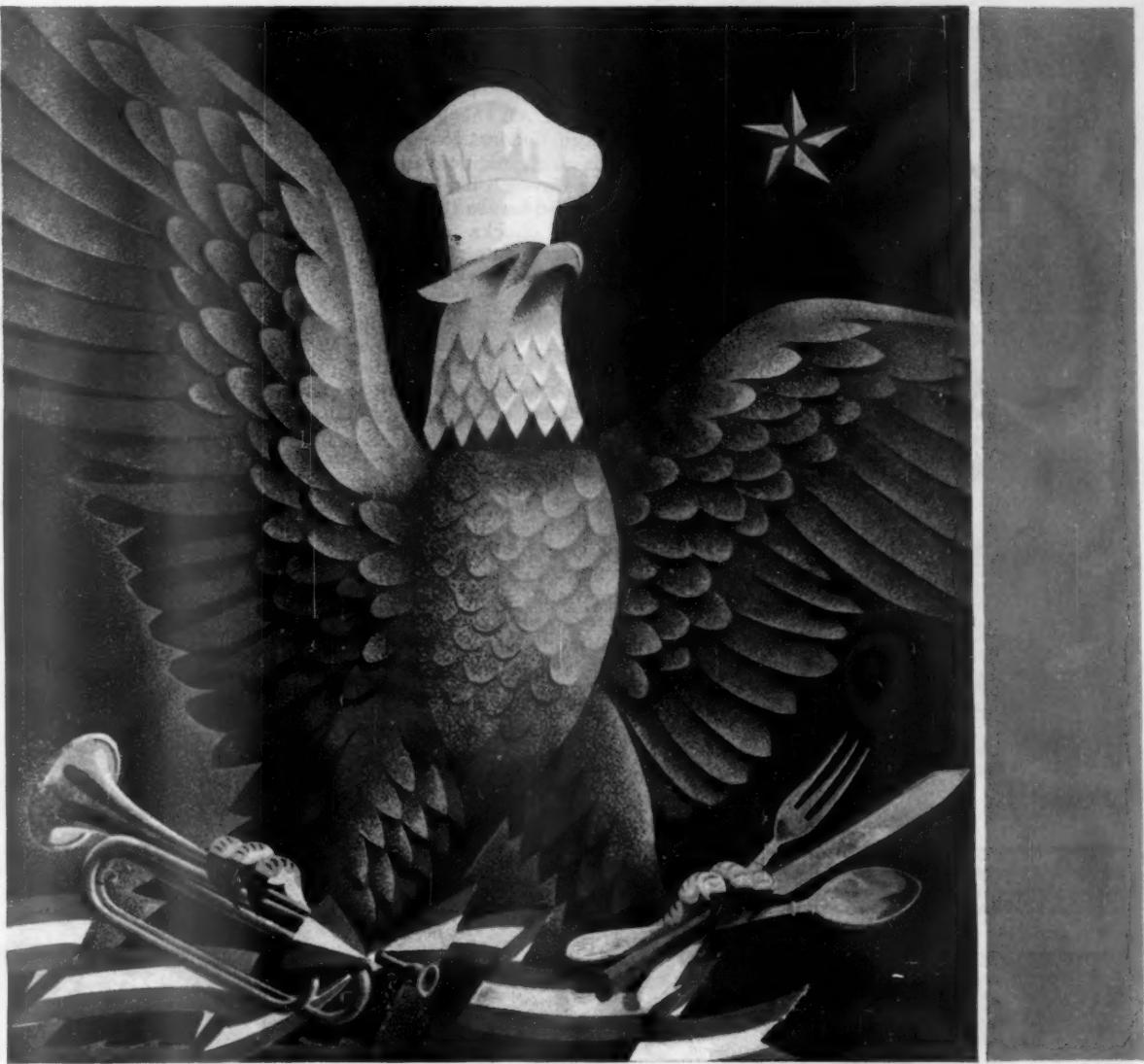
THIS is one of many automatic cutting machines which we produce. It's a 72" variable, alternate-bias, batt cutter of excellent design and construction. Angle of cut is infinitely adjustable.

Applications of Alfa automatic cutting machines are unlimited. If your cutting operations on batts, rubber, sheet metal, textiles, impregnated sheet materials, paper or paper board need improvement, investigate our product. Often, Alfa cutters combined with other mechanisms, save labor and time; simplify production and improve products. Catalog on request.

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- ★ Unaffected by any food or fruit acids.
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- ★ Lustrous, handsome, sanitary.
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- ★ Lowest maintenance and depreciation costs.

FOOD and stainless steel are two substances which get along well together. You can find ample evidence of that fact in the preparation and serving equipment of almost any hotel, hospital, restaurant, bar or soda fountain—and more recent evidence in the mess trays, flatware, stock pots, canteens, meat pans, field kitchens, portable refrigerators, etc., of the Armed Forces.

Food and beverages, after all, are chemicals—and Allegheny Metal, the pioneer stainless in this country, is a highly chemically-resistant material. It's bright, tough, close-textured and excep-

tionally strong. The sanitary factor is high, cleaning is easy, and life in service is exceptionally long. Those are properties, when you're thinking in terms of food, that look good from any angle.

If you have ideas and questions on food equipment—anywhere along the line, from processing to serving—we can fill in many of the answers. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa., and other Principal Cities.

Allegheny Metal is also handled and stocked by all Joseph T. Ryerson & Son, Inc. warehouses.

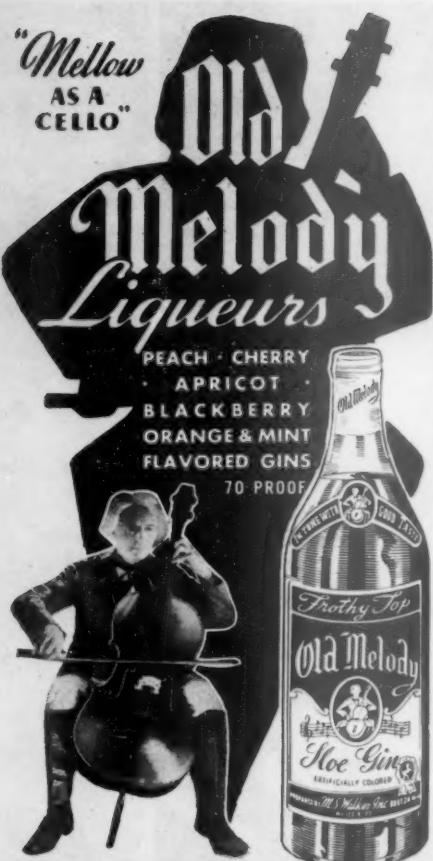
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Let us help you or your customers with the design and production of industrial parts, accessories and products to be made from the fabrics you manufacture. It will be mutually advantageous!

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proval of both the bank and Checks, Inc. The bank must be a member of the Federal Deposit Insurance Corporation as well as a member of the Federal Reserve System. All checks are payable at par through Federal Reserve Banks.

Checks, Inc., incidentally, also sells its service through banks which are directly licensed to use this service in lieu of cashiers' checks or other special checks where customers do not enjoy personal checking accounts. Fees are uniform.

Herbert S. Woodward, cashier of Columbia Heights State Bank, in a Minneapolis suburb, says, "Bondified" money orders give the smaller bank a chance to give service, at a profit, which previously had netted a loss. We are now selling more money orders than before, and notice that purchasers tend to become customers in other departments."

The plan, tried and proved originally in Baron County, Wis., with bankers at Cumberland, Prairie Farm, Chetek, Cameron and Rice Lake, gave results that were promising. Banker Partridge of the Indianhead State Bank of Chetek, says, "Inquiries have come from many points to which post card checks have been sent."

—VERNON E. BRINK

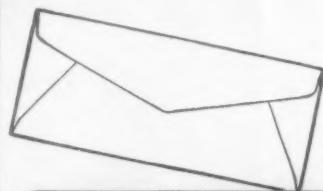


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Tension Envelopes seal easily and stay sealed. Office boys finish quicker... mail gets out faster... letters and enclosures arrive in perfect condition.

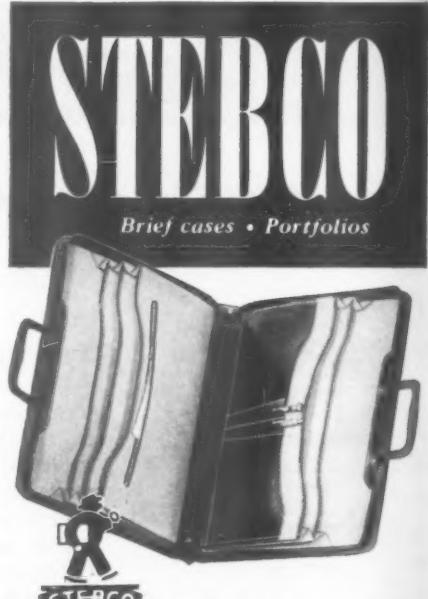
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Twin Cities Zephyr along the upper reaches of the Mississippi

Trains for the Modern World

There are two Twin Cities Zephyrs in the fleet of fourteen stainless steel streamliners serving fortunate cities on the Burlington Lines. Every day, each way, they provide a swift and comfortable daylight trip between Chicago, St. Paul and Minneapolis.

Stainless steel was chosen for these and other Budd-built trains because it has the most desirable combination of physical properties

of any known metal suitable for structural purposes. It is the strongest. It has the highest resistance to impact or fatigue. It is non-corrosive. It is the only metal which can be toughened by welding. It resists abrasion better than any other. Fabricated by the patented SHOTWELD* system, Budd stainless steel trains represent the highest standards of strength and safety.

For nearly three years, Budd facilities have been wholly employed in war production. When men and materials are released from that task, new trains of stainless steel, embodying still more modern ideas of travel luxury and convenience, will roll from the Budd shops, for service on American railways.

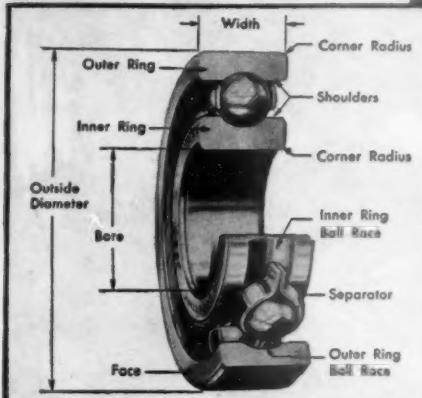
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The subject of the Ball Bearing is on everyone's lips nowadays, because of its immense importance to the prosecution of the war.

But how many know what a ball bearing is—what it does—why it is so indispensable? A ball bearing is not merely a steel ball! It consists of the assembled mechanism illustrated.

It is used wherever shafts turn, to support loads, to permit higher, smoother speeds. Because nothing rolls like a ball, it reduces friction and wear and assures that the precise "location" of machine parts is maintained.

To those who would know more about this "tremendous trifile" we offer free an interesting 112 page book entitled, "Why Anti-Friction Bearings?"



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Long Job...

CANADA will have billions of dollars' worth of surplus war goods to get rid of, expects to be at it 15 to 20 years

CANADA expects that it will take 15 to 20 years for her to sell her billions of dollars' worth of surplus war goods and government-owned war plants. To do the job, the Canadian Government has set up an organization which will have offices in the United States and Great Britain as well as in Canada.

Canada has already disposed of some surplus or obsolete equipment of the armed services through interdepartmental operations of the Salvage Board of the Treasury Office of the Department of National Revenue. Equipment has been sold by public auction by the armed services. Equipment for manufacturing has been disposed of in a small way through the Department of Munitions and Supply, with machine tools and similar goods to be available for further war use.

The Canadian Government has set up Crown Assets Allocation Committee and War Assets Corporation Limited.

The Allocation Committee is composed of ten members with a full-time chairman and represents government departments, also agriculture, labor and householders.

The Crown Assets Allocation Committee will have the job of studying and listing all items of surplus war assets from airfields and barracks to raw material stockpiles. The committee is to advise the cabinet of the government, which in turn will issue instructions to War Assets Corporation.

The War Assets Corporation is a government company with business executives from all parts of Canada on its board of directors, and is to handle the actual disposal of surplus and obsolete war materials.

The War Assets Corporation is to be a permanent organization and is authorized to hold, manage, operate or sell property entrusted to it, to convert surplus materials to basic products, to hold stocks pending ultimate disposal, and generally to handle assets assigned to it in the public interest. It does not plan to peddle jeeps, automotive equipment, machine tools or other assets, but to hold these in a pool to be released gradually to available markets. It will set a price for each commodity, based on cost of production, depreciation and current market price. It plans not to flood the market and thus bring on or aggravate unemployment.

While certain points have been settled for the operations of the War Assets Corporation, all the problems have by no means been threshed out. One of the big problems is to decide which gov-

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ernment companies are to stay in business, and which are to be shut down. Thus it is expected that explosive plants will be largely dismantled, while such companies as Research Enterprises Ltd., making optical glass and fine instruments; Polymer Corporation, making synthetic rubber; and Victory Aircraft Ltd., making Lancaster bombers—to name a few of the government companies with postwar use—will continue operations to some extent.

Where government ownership of plants and additions and equipment ties in with private plants, accelerated depreciation will make some of these plants available to private industry with which they are connected, while in many cases it is expected that the Canadian Government will be in partnership with private industry for many years.

—JAMES MONTAGNES



Future Television?

The television entertainment unit of the future may be markedly different from the sets that have been used according to Barnes & Reinecke, industrial designers and engineers of Chicago. The present idea of a large cabinet and small direct image is reversed—this set of the future is small and is intended to project a large image on a screen. It could be set up in any room.

While the time is not yet, according to Mr. Reinecke, this may well be the type of set which will be used when television is ready for wider public enjoyment.

He has incorporated this set in a radio, the dials of which are seen in the photograph, and a wire recorder instead of a phonograph record player to make the set a complete entertainment unit.

The wire recorder, already in use by the armed services, is being perfected for civilian use. One spool will play as long as eight hours.

Housing and dials are plastic.



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Precision Transportation produces results. Here's one example: the N. & W. handled more ton-miles of freight per mile of road during the five-year war period, 1939-1943, than any railroad in the United States of 350 miles or more in length.

Today, Precision Transportation is concentrating on keeping the wheels rolling to Victory. When Victory is won, Precision Transportation will help to build a greater and better America — an America of sound peace and sound progress.

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DO YOU WANT NEW PRODUCTS

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Retailers for Tomorrow

THIS YEAR, the Kentucky Future Retailers Association held its first convention. A pioneer among state associations for young retailers, the association is a student-run organization of high school boys and girls who, under the vocational training program of the public schools of the state, are receiving practical training in retailing while completing their high school work.

Five years ago, W. Maurice Baker, head of the department of distributive education at the University of Kentucky, saw the advantages of an organization of young retailers in local communities where distributive education was being taught. Local chapters of the organization were formed to undertake community activities.

As the number of local chapters increased, it became evident that a state organization to coordinate the activities of the local chapters would be helpful. Two years ago, the Kentucky Future Retailers Association, composed of local affiliated chapters, was formed.

A state constitution and by-laws were worked out. The purposes of the organization, according to the constitution, are: to develop competent aggressive leadership in marketing; to create and develop the desires of those who follow retailing as a career; to strengthen the confidence of boys and girls in themselves and their work; to create more interest in the intelligent choice of occupations in retailing; to encourage members in the development of techniques and attitudes for service in retailing; to participate in worthy undertakings for the improvement of retailing and other distributive occupations; to develop character, train for useful citizenship, and foster patriot-

ism; to participate in cooperative effort; to encourage and practice thrift; and to encourage improvement in scholarship.

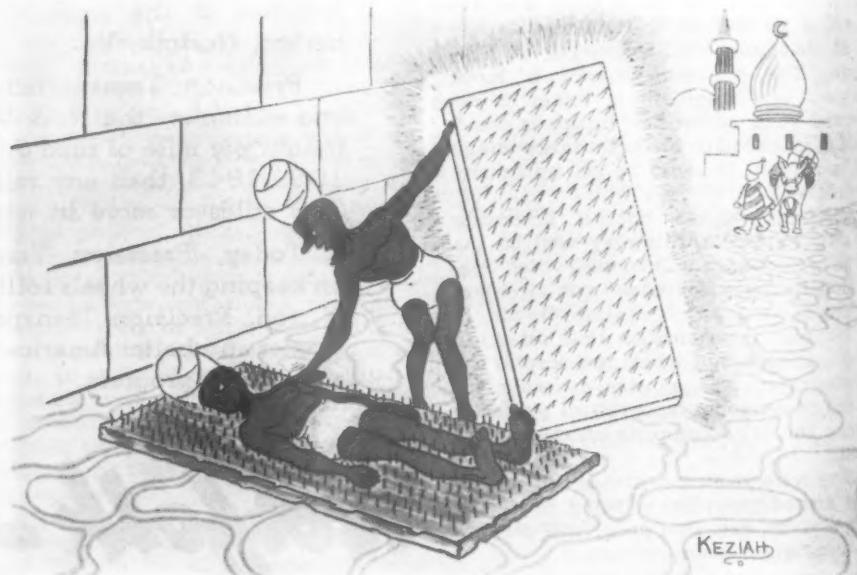
Membership is of three kinds: active, associate and honorary. Active members are high school students. When the student completes his school work, he becomes an associate member. Instructors, school superintendents and principals, business men and others, who are helping advance vocational education in the distributive occupations, may be elected to honorary membership.

After the state association was formed, the Future Retailers felt they needed a state convention in order to meet other Future Retailers and to exchange ideas. This state convention was their convention, and they ran it. No long-winded speeches. Instead, there were practical contests, such as demonstration sales, from which they could learn new techniques while competing.

A business speech contest was one of the highlights of the convention. In the same manner that it would be given before a business organization, each contestant delivered a three-minute speech on "Why I Chose Retailing as a Career."

A large number of young people enter retailing after leaving high school. In the past, they drifted into this field with perhaps no previous experience or training, which was a handicap both to them and to their employer. Now, they can get experience and training through the vocational training programs of the public schools. Through the Future Retailer organization, they are developing leadership and other qualities which will help make them competent business leaders.

—VERA W. GILLESPIE

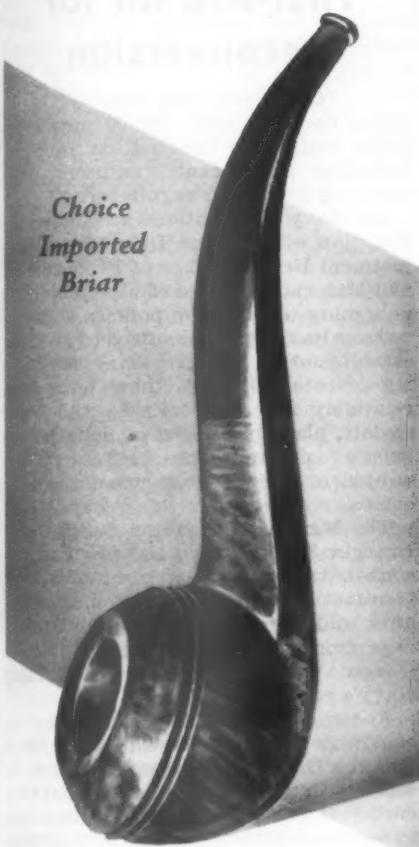


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Today after two and one half years of war, there still exists a rare vintage collection of imported briar from which to carve a limited number of Emperors.

Nature took centuries to perfect these treasured burls. Skilled craftsmen who sculpture each Emperor know this—striving to reveal all the unique beauty with which Nature endowed the costly briar.

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RELIEF agencies for home
and war are united so that
you can give more to more

IN October, for the second time, a united appeal will be made for the 19 war-related agencies comprising the National War Fund and for the home-front agencies of local community chests. The total objectives of some 10,000 of these federated campaigns will exceed \$250,000,000.

At one time and with a single gift, Americans may contribute to the vital welfare needs of their individual communities, to the well-being, comfort and happiness of relatives in the armed forces, and to the emergency relief for victims of war among the United Nations. A contribution to any of these community war funds is a gift that goes to every front.

The National War Fund is a federation of war-related philanthropies established early in 1943 to provide essential wartime services to members of our fighting forces and merchant marine and to supply essential relief to our allies and to refugees from occupied countries.

The appeals of the USO, British War Relief, United China Relief, etc., are all included in one fund-raising campaign which is held in the fall. (The Red Cross which makes a separate appeal, has its campaign in the spring.)

Before agencies are admitted to the National War Fund, they must be registered with the President's War Relief Control Board and certified by the Board to the National War Fund for participation. The board of directors of the National War Fund determines what agencies shall be included and for what amounts.

The National War Fund keeps in close touch with appropriate government agencies so that no distribution can be made without the approval of these agencies and their assurance that supplies will reach those in need and not fall into the hands of the enemy. A further check on distribution is afforded by



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Out of Tough Sweeping Jobs

Steel back of Speed Sweep brushes is the basis of unique construction for faster, easier, better sweeping. Block is $\frac{1}{3}$ usual size — easier to handle. Tufts of longer, better fibres are more compact — provide "spring and snap" action. Handle instantly adjustable to height of sweeper — reduces fatigue and strain. Speed Sweep brushes are built to outlast ordinary brushes 3 to 1.

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All budgets of member agencies are reviewed in detail by the National War Fund Budget Committee and cleared item by item, with an advisory group of government officials and other agencies to insure, so far as practical, that there is no duplication either in the allocation of funds or in the carrying out of the relief projects proposed.

First-Aid Kit for Reconversion

(Continued from page 34)

Army now has some 15,000 men especially trained in termination routines including accountants, auditors, lawyers, engineers and negotiators.

All Navy terminations are under the direction of the new Industrial Readjustment Branch, Office of Procurement and Material. A series of nine directives governing termination policies and procedures has been transmitted to all shore establishments and regional contracting officers. Although there have been relatively few cut-backs by the Navy to date, plans have been made to let the existing procurement staff carry the burden of terminations when the time comes.

The Material Inspection Service now engages 30,000 officer and civilian personnel, trained in the groundwork of termination. Another group of accountants and legal experts will be taken over from the Cost Inspection Service—men who have been conducting Navy's renegotiation work.

For the most part, terminations on contracts placed by the Bureau of Ships and the Bureau of Aeronautics will be handled in the field, by the regional procurement officers, with only settlements exceeding \$500,000 coming to Washington for review.

Uniformity important

"THE Navy Department recognizes the importance of uniformity as between the major government departments' procurement agencies," says Rear Admiral W. B. Young, Chief of the Bureau of Supplies and Accounts, principal navy purchasing agency. "It is believed that there will be no differences in policy, and that procedural differences can and will be reduced to a minimum."

One major problem in termination procedures still presses for the attention of the Office of Contract Settlements—the matter of horizontal "company settlements." Congress paved the way for pooling of all termination negotiations in cases where a single corporation may have as many as 20 production contracts with five or six

different federal agencies. A special joint termination committee may be set up in such cases; but the regulations under which such committees may be created have not yet been issued. Until they are established, each contract must be cleared through the original procurement unit, regardless of how many terminations may come along to the same company—a bothersome and costly duplication of work for management.

In the early days of the war, many contracts were drawn hastily without clauses assuring the contractor adequate financial protection on termination. Some "contracts" in fact, were little more than oral agreements. The law, however, provides that the contractor who holds a "defective, informal or quasi" contract shall not be deprived of any rights and privileges accorded under the Settlements Act, Section 7 (a) of which stipulates that each federal department is obligated to "provide for such fair compensation."

Prompt settlement desirable

ALL settlements to subcontractors may be made through prime contractors, and in such cases the termination agency "shall limit or omit its review of such settlements with subcontractors to the maximum extent compatible with the public interest."

Termination and prompt settlement are major aspects of industry's problem in liquidating the war production. Other related problems are disposal of surplus property, clearing of special machinery, then reconversion. But the greatest of these is termination—to maintain solvency, and pay rolls.

For this stage of the game, the termination machinery is in fair shape in Washington.

Business opinion, however, sees the need for further improvement. Objections most frequently voiced are that paper work is still too voluminous, various agencies have not coordinated their termination procedures, government auditors are frequently confused as to the scope of their operations, repeated examinations of company accounting procedures by different bureaus have slowed up settlement and regulations are too narrowly interpreted.

As remedies these steps are urged:

1. A uniform set of termination policies to which all services must conform.
2. Regulations compelling the sale or disposition of inventories of work-in-process within 30 days.
3. Specific directions defining the scope of auditing procedures.
4. Acceptance of all expenses incurred in good faith and in accordance with sound business practices as a legitimate part of termination claims.
5. Allow the contractor a profit on uncompleted work on a basis comparable to that to which he was entitled on the original contract.

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Management Holds the Scales

(Continued from page 24)

through the years and also it is finished to a degree which was unknown in the earlier years.

These factors, as well as the increase in fabrication of bridges, structures, ships, and other products not sold on a tonnage basis, make tonnage comparisons less than exact.

Dollar comparisons also are inexact because of the fluctuating buying power of the dollar. These inaccuracies make for understatement.

The comparison is between 1902, the first full year of U. S. Steel's existence, and 1943. These years were selected because in both the tools were used to approximately full capacity. (See table on page 24.)

By the use of tools, the figures show, a man's work for an hour in 1902 resulted in 30 pounds of steel. By 1943, the tools had so improved that an hour of work resulted in 54 pounds of steel. The hours worked in 1943, with the tools of 1902, would have resulted in 11,200,000

1902 the sum of \$90,300,000 to be distributed to the owners or carried forward for future needs, while, with the greatly increased tools of 1943 and the greatly increased business, there was available as income only \$63,400,000, a decrease of 30 per cent.

In 1902 we received from customers \$.61 for each dollar of tools; in 1943 we received from customers \$1.13 for each dollar of tools—an increase of \$.52. Now let us see who got it: Employment costs increased \$.34; taxes increased \$.07; other costs increased \$.19—a total of \$.60. Income for owners and future needs, on the other hand, decreased \$.08 per dollar of tools.

The owners have steadily increased their investment in tools, but they have been steadily getting less for their tools, while those who use the tools are getting steadily higher wages.

This is not something to cry about. I have intentionally omitted a discussion of taxes, because they only cloud this relationship. The question here is whether

Dividing the Income

How U. S. Steel's income was divided in 1943

	Millions of Dollars	Dollars per Worker
CUSTOMERS' PURCHASES	\$1,976.8	\$5,806
COSTS:		
Wages, salaries, soc. sec. taxes and pensions	912.9	2,681
Purchased products and services	705.6	2,073
Wear and exhaustion	134.0	394
Ext. Additional War Costs	25.0	73
Interest	6.3	19
Taxes	129.6	380
Total	\$1,913.4	\$5,620
INCOME	63.4	186
Dividends—On cumulative preferred stock	25.2	74
On common stock	34.8	102
Carried forward for future needs:	\$ 3.4	\$ 10

tons. The actual shipments in 1943 were 20,100,000.

The tools provided by the owners in 1902 were equivalent to \$1.15 for each hour each worker worked. In 1943 the tools provided for each hour of work were \$2.54 or more than twice the tools of 1902.

But there was available as income in

or not the present distribution is really in the interest of permanent and beneficial progress for our people as a whole.

Starving out the owners who provide the tools would seem to be one of the several certain ways of preventing progress. That is fundamental. Sleight-of-hand tricks cannot produce goods; they may delay and even reverse progress.

White House Painter

FOR years you've been the best painter in Denver—or in all Colorado, for that matter," William E. Fisher (often called "the architect who built Denver" and a good man for any young craftsman to know) said to Nate Schriber one day. "You've got pride of workmanship. That's quite rare, you know. You really ought to go into business for yourself."

Mr. Schriber followed Mr. Fisher's advice and today, has a nation-wide reputation as a contractor who, more often than not, lands the country's biggest and most difficult paint jobs. Nate has managed to avoid "desk work" by hiring others to do it. He is happiest when he helps his men paint something, and no helper ever stepped faster than he himself does when one of the painters sings out, "Hey, Nate! Toss me a No. 2 brush!"

Nathan Schriber was born in Brest-Litovsk, Russia, in 1888. As a youngster, he was apprenticed—for three years at no pay and later for \$2 a week—to a



Big and tricky paint jobs are the ones Nate Schriber likes

painting contractor uncle. In 1905, at 19, Nate came to America, went to Denver and hired out as a journeyman painter.

Powerfully built at 56, Mr. Schriber is still as good a painter as any of the hundreds of craftsmen who work for him. His organization, the Schriber Decorating Company, has done a great variety of jobs in and around Washington, including painting the White House.

Although the painting contract for the exterior of the White House amounted to only \$10,000 or so, as compared to some Schriber jobs that run more than \$1,000,000 and may last for years, everyone in Schriber's organiza-

tion was thrilled to work on the Executive Mansion. It was a hurried job, with much special instruction as to permissible types of scaffolding and hours when work could be done.

Nate got a glimpse of President Roosevelt in his swimming pool. Later, while painting the new East Wing, built in 1942, Mr. Schriber had the thrill of shaking hands with the President during the laying of the cornerstone.

Incidentally, the White House should have had a coat of paint last year, but it was decided to let it wait until the end of the war. It is generally understood that it will be painted again in 1945, when the Schriber company probably will be asked to bid again.

"I lost my shirt," says Schriber commenting on his first big government job in Washington. He had done some federal buildings in New Mexico and Colorado, and a friend suggested that his company submit a bid for all painting work on a U. S. Department of Agriculture building then under construction. Nate landed the job, which called for painting more than 11 miles of corridors and was figured at something more than \$100,000.

Big jobs came fast

HAVING developed an organization in Washington, located on Third Street, not far from the Post Office and Union Station, Nate set out to obtain other contracts. Jobs came thick and fast, including the Archives building, National Defense building, air bases in Maryland, Naval laboratory school, Marine Corps hospital, air base at Quantico, Washington Auditorium, barracks for WAVES and SPARS, and numerous non-government buildings.

While the work in and about the national capital constitutes something like two-thirds of the volume of business done in the past three years by the Schriber Company, many of its major jobs have been in the "great open spaces" between Missouri and Nevada.

Nate always has been more interested in the tricky jobs than in merely big jobs. His toughest painting problems have been in high-altitude locations in mid-winter. While his men were painting some of the buildings in Yellowstone National Park a few years ago, the temperature dropped to 50 degrees below zero. Nate had to keep a stream of painters headed toward Climax, Col., while painting the town where molybdenum comes from, because no man could stand it for more than a few days, working at an altitude of 11,000 feet in temperatures between 25 and 40 degrees below zero.

In painting the ultra-modern buildings at Fitzsimmons General Hospital and the Denver ordnance plant, Nate's

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Common Stock Dividend No. 115

A cash dividend declared by the Board of Directors on Sept. 13, 1944, for the third quarter of the year 1944, equal to 2% of its par value, will be paid upon the Common Capital Stock of this Company by check on Oct. 16, 1944, to shareholders of record at the close of business Sept. 29, 1944. The Transfer Books will not be closed.

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San Francisco, California

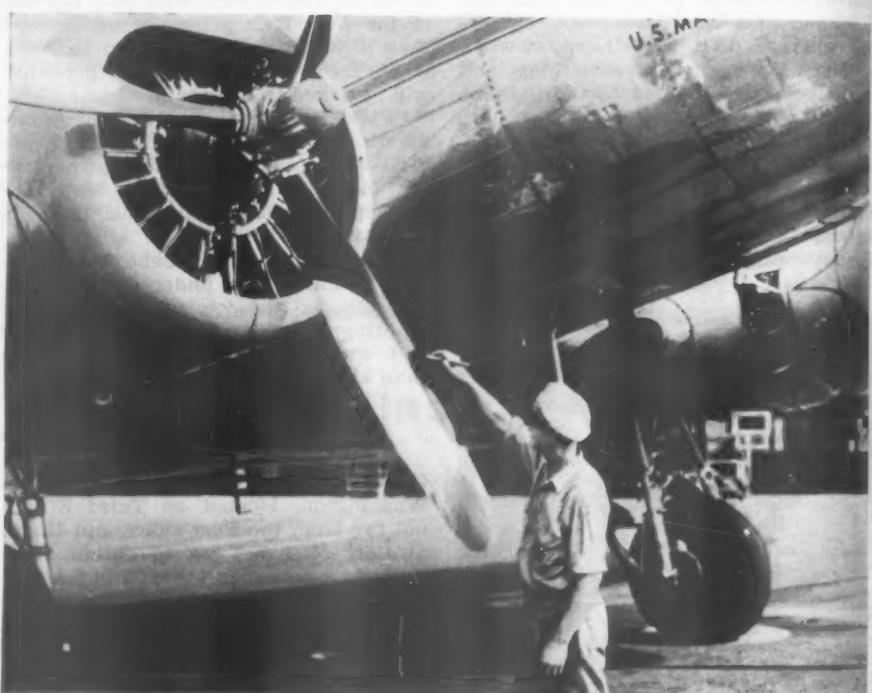
men were engaged in psychological treatment of the interiors of buildings, with textures and colors developed to produce specific desired mental effects. Nate is happy to leave the fine points of this new art to the architects and psychologists, but such jobs fascinate him.

Most exciting of all of Nate's big jobs is the current one at Kansas City's great war enterprise, the Sunflower ordnance plant. Covering 28 square miles and involving some 3,500 buildings, this plant is a monster. Moreover, it called for some novel kinds of painting, including very careful powder-proofing by taping and sealing all joints, cracks and

seams—otherwise powerful explosives in the atmosphere might filter into such a spot and presently blow up.

Schriger's men now are working on the Sunflower plant's latest additions and will not be finished before mid-winter. The paint contracts on the Sunflower plant have totaled \$1,161,000 which constitutes the largest—as well as the trickiest—of all Nate's jobs to date.

Postwar prospects? Nate Schriger says there's plenty of work for years to come. The man who paints the White House knows that between 75 and 100 painters are needed in the Denver area right now. —HENRY WADE HOUGH



Chemical Lacquer for De-icing

For de-icing aircraft propellers a chemical lacquer has been developed by Hamilton Standard Propellers division of United Aircraft Corporation, according to Erle Martin, engineering manager. The new de-icer is painted or sprayed on propeller blades and, by means of chemical action, affords protection from icing conditions for long periods of time.

American Airlines conducted extensive engineering and operational testing of the preparation during the past winter. Twenty of American's flagships were equipped with it and flown for 6,000 hours with outstanding results.

This lacquer is black, has a consistency about like that of glycerine, and paints or spreads freely, drying with a shiny tacky surface. A satisfactory surface can be maintained on blades with little or no maintenance, giving protection down to temperatures below zero Fahrenheit.

Ice-releasing chemicals in the compound eventually become exhausted in the film. This condition becomes apparent when the substance loses its sheen. Additional coats are then applied.

Under favorable weather conditions the lacquer lasts hundreds of hours, although a sustained flight under adverse conditions, such as a heavy rain followed by severe icing, may require renewal after completion of the flight.

Present propeller de-icing is accomplished by a ring which slings anti-freeze fluid to the blades. The lacquer's chief advantage is said to be that the possibility of exhausting the fluid is eliminated.

The chemical lacquer also may save as much weight as a hundred pounds on long flights of large planes. It also needs no attention by the flight crew and may be applied in the field or under adverse conditions without preparation or special skill.

Britain Tries Planned Economy

(Continued from page 27)

monopolistic control of production prevents lowered prices that would start up bogged-down consumption.

The British white paper, referring to these factors, states:

"Every trade depression would automatically bring its own corrective since prices and wages would fall, the fall in prices would bring about an increase in demand and employment would thus be restored. Experience has shown, however, that under modern conditions this process of self-recovery, if effective at all, is likely to be extremely prolonged, particularly in a complex industrial society like our own."

Recovery is retarded

ERNEST Bevin, Minister of Labor, and one of England's foremost trade union leaders, in a Parliamentary speech supporting the plan, corroborated the part collective bargaining plays in retarding normal recovery. He said:

"Under the system which governed our economic life from the industrial revolution onwards, unemployment and deflation were regarded in the main as automatic correctives for a lack of equilibrium in our financial and economic position. . . . The need for adjustment was thrown on industry. Revisions of wages or production had to be made from time to time. . . . The stronger trade unions became, the more the resistance to change in money wages."

Under the British plan unemployment is divided mainly into three types: Normal, Technological, and Cyclical, or what is more popularly known as unemployment due to trade depressions.

For each, the plan provides a separate treatment:

Normal unemployment: This mostly embraces workers temporarily unemployed because they are changing jobs or because their occupations are seasonal. This type of unemployment occurs whether trade is active or depressed and the Government clearly states that, except for providing employment exchange facilities, its plans are not for those subject to these hazards.

The plans "are not to be interpreted as exonerating the duty of the citizen to fend for himself . . . nor as applying to cure unemployment of a type due, not to absence of jobs, but to failure of workers to move to places and occupations where they are needed." Full employment, therefore, will always have this irreducible minimum of unemployment.

Technological unemployment: This type of unemployment is becoming more prevalent because of technical improvements in production, change in fashion or the growth of competitive industries. To assure employment for workers displaced by technological changes the

British Government makes several revolutionary proposals. Displaced labor is to consider itself as mobile. It is also expected to subject itself to training for a new job.

Industry is also to help in providing new employment for workers displaced by technological changes. New plants will have to be built in areas likely to be breeding grounds for the technologically unemployed. The location of new industries can be directed in Britain to prevent overconcentration of industry in one locality. Not only is this to avoid congestion of population, but also to meet the menace of the bombing age.

When it is impossible to bring new industries into an area with surplus manpower, workers will be expected to move to areas where there is work for them. Lack of suitable housing will no longer be an obstacle as a substantial proportion of the new houses built after the war will be suitable for working class occupation. Transferred workers will receive resettlement allowances to meet the costs of moving. Such allowances will cost infinitely less in the long run than doles.

Training for new jobs

WHERE an industry can no longer support its full labor force, training facilities for new jobs will be provided at government cost. While training, the worker will receive an allowance completely divorced from the unemployment benefits he might have received.

While these allowances will be higher than the unemployment benefits, they will be lower than the general run of wages he is likely to receive when employed. The provision of training facilities for the technologically unemployed worker is a tacit recognition by the Government that his situation is not due to his fault alone. His training at government cost is, also, along the new principle that full employment is to be achieved by the cooperative effort of the government, labor and management.

Cyclical unemployment: It is in the prevention of this type that the Government will show itself most active while, at the same time, relying on complete cooperation from other parts of the community. The plans are based on the premise that cyclical unemployment occurs when the community spends less money than is needed to buy the whole output of which it is capable.

In other words, the Government believes that full employment depends on anticipating a drop in the volume of mass purchasing or, if it fails to do that in time, on arresting the drop immediately. Stable employment depends on stable consumption.

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unpredictable reason sometimes decide to spend less. The British Government subscribes to the theory that past depressions occurred because a minor disequilibrium in the economy was not corrected at the beginning. What started as a minor depression was allowed to extend bringing less and less consumption and more and more people without work.

The ideal, in the future, will be to head off a depression before it has started. If the Government cannot prevent a depression getting started, then it will take means to limit its effect and restore normal conditions before the depression has gained uncontrollable momentum. The Government does not consider its function is to provide work for people who are without work. It will try at all times to create conditions that will keep them at work.

Wages related to production

THE first requisite is for wages and prices to be kept reasonably stable. This will involve a new outlook by both workers and employers. The strength of the bargaining powers of a trade union will not be the guide to ever-rising wages. Nor, for that matter, will high prices be governed by the strength of a trade association. The British Government lays down the rules for regulating wages and prices thus:

"If we are to operate with success a policy for maintaining a high and stable level of employment it will be essential that both employers and workers should exercise moderation. . . . Increases in the general level of wages must be re-

lated to increased productivity due to increased efficiency and effort. . . . Employers, too, must seek in larger output rather than higher prices the reward of enterprise and good management."

The Government will also pay attention to private investment, and try to prevent dangerous swings in its volume. This will apply to new venture capital as well as to expenditures by existing businesses on extension and maintenance of facilities. The importance of private investment to full employment is not underrated.

Therefore, although it realizes that the public should be protected against unsound financial schemes, it also feels that restrictive legislation which discourages floating of new capital can have a serious deflationary effect.

Similarly, the government believes that interest rates affect the volume of capital expenditures. If the cost of borrowing is high, some projects, not profitable at that rate, will not be undertaken. For this reason, the Government will encourage cheap money. This it hopes to achieve through the central banking system (i.e. The Bank of England) working in conjunction with the larger commercial banks.

When private investment lags, as sometimes it will, the Government proposes to step in with expenditure on public works. Municipalities and public authorities will be expected, at all times, to have programs of public works drawn up five years in advance, ready to be put into operation at the first signs of a slump.

The Government proposes to use a third instrument if, despite its other ef-



"What was the excuse for your frittering around before you began needing it for your morale?"

forts, a progressive degeneration of trade threatens to develop. It realizes that money withdrawn from the community as advance payments on Social Security Schemes is money potentially capable of being spent on consumer goods. In good times, the withdrawal of such money has a beneficent influence in restraining inflation.

The Government, therefore, proposes a scheme for varying, in sympathy with the state of employment, the weekly contributions by employees and employers under schemes of social insurance. As unemployment rises, contributions paid in would decrease on a percentage ratio. This would increase purchasing power in the hands of workers remaining employed and help to maintain the demand for consumer goods.

While the Government does not specifically declare its intentions to do so, it does foreshadow the possibility of using the same plan with taxes. In good times, they would be raised above budget requirements. In bad times they would be lowered to provide additional purchasing power.

To study employment trends

TO PUT such revolutionary plans into operation successfully, the Government realizes that speed is essential. To be advised when it would step in with certain measures, the Government proposes to rely on a small central staff of statisticians who measure and analyse economic trends, and submit appreciations of them to the various heads of the Government departments concerned. This central staff is simply a fact-gathering organization.

It will be compulsory for different agencies to supply the information that the central statistical staff would require. For example, employers would supply, periodically, statistics on actual and prospective employment. Banks would supply information on savings. Private industry as well as public authorities would give their plans for projected capital expenditures. Thus, it will be possible at all times to have an overall picture of the national economy.

In these Government proposals, no ideological question is raised of public or private ownership. The machinery, with the expert statistical staff as its main cog, is intended to function under the existing economic set-up.

Management will be expected to cooperate by giving information it might consider private, but without which the Government can't foresee the course to take in maintaining conditions of stable employment. Labor, on the other hand, must agree to the mobility of its workers and exercise moderation in future with regard to wages or other restrictive practices.

How the British Government's proposals would fit into the economic picture of the U.S. is not easy to decide. Persistent and ineradicable unemployment is here only a late bitter experience, dating only from 1929. The necessity for taking bold steps to eliminate



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The world's largest manufacturer of electrical appliances and supplies has selected Santa Clara County, the Pacific Coast's fastest growing industrial area, for its post-war plant.

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DEPT. N SAN JOSE CHAMBER OF COMMERCE, SAN JOSE 23, CALIFORNIA

**SANTA CLARA
COUNTY** *California*

The population center of the Pacific Coast

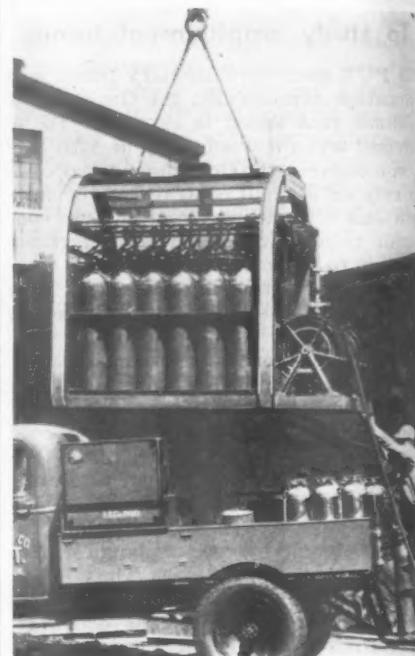


it is not as profound a conviction as in Britain, where it was already a problem even in 1913 when the first unemployment insurance scheme was formed.

The sacrifices which labor would have to make, by agreeing to be mobile and undergo training for new jobs, have been proved to be necessary in Britain. A generation that could not find work after World War I, has become convinced that a lifetime on the dole must be averted.

To effect this mobility, there is, of course, no question in Britain of States Rights which might mean labor laws and conditions militating against a national policy of labor mobility.

Again, the part that industry will play in the plan is made easier in Britain by the fact that Government there has never shown any hostility to business, big or little, and has always tried to keep an even balance in its favors to labor and management. Hence, industry can be counted on in Britain, to be fully cooperative with Government.



Flying Fire-Fighter

It swings through the air with the greatest of ease—this new platform loaded with fire fighting carbon dioxide cylinders and control equipment. It is designed for use in the boatyard of the Electric Boat Company and can be swung by overhead crane to various points in the boatyard, leaping many a hurdle that would stop a fire truck.

Twenty-four 50 pound cylinders of gas are arranged in four banks with hose reel and nozzle attached. Specially built equipment of this type for special hazards is found invaluable for reaching hard-to-get-at fires in shipyards and factories.



G. I. UNIFORM for Sugar... by Mr. Cellophane

Even in the steaming jungles of the Pacific, this Army Field Ration Sugar pours freely from a special Sylvania cellophane envelope. Unquestionable proof of Sylvania's moisture-proofness! Here you see just one of the many qualities which make Sylvania cellophane

indispensable for vital wartime assignments.

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FACT OR FICTION?



Q. Thirteen messages are carried simultaneously on a single pair of wires, by new Northern Pacific communications system. Fact or fiction?

A. Fact. Electronic vacuum tubes enable three telephone conversations and ten telegrams to ride on one circuit . . . a marvelous new aid to railroad operations.



Q. N. P. shop "doctors" use magic powder to diagnose "that tired feeling" in locomotive parts. Fact or fiction?

A. Fact. Iron filings, used with electronic Magnaflux, reveal internal fatigue spots. "Sick" metal is instantly scrapped.



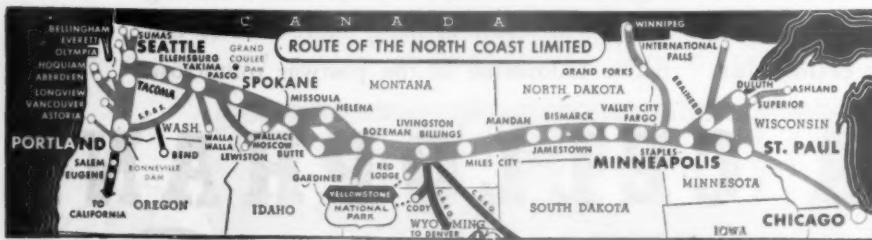
Q. Electrical fencing, installed in mountains by N. P., is used to discourage foolhardy climbers. Fact or fiction?

A. Fiction. It's a safeguard for trains, flashing instant "stop" signal if moving rock touches fence.



Q. Electricity in the rails controls stopping and starting of N. P. trains. Fact or fiction?

A. Fact. Electrical impulses carried through the rails operate 3,867 block signals on the Main Street of the Northwest.



NORTHERN PACIFIC
Main Street of the Northwest

First Glider...

SAN DIEGO is prepared to prove that man made his first flight there in 1883

STUDENTS of aviation say that Otto Lilienthal was perhaps the first man to make successful glider flights back in 1891. In San Diego, Cal., however, home of wartime aviation factories, civic leaders insist that a Californian beat Lilienthal by eight years—and are prepared to prove it.

A committee of the Junior Chamber of Commerce has located the site of the first glider flight and is raising \$10,000 to perpetuate the historic occasion with a 100-foot granite and bronze memorial shaft. Recently Harry T. Woodhead, Consolidated Vultee Aircraft Corp. president, held a wooden stake, while the flyer's brother hammered it into the ground to mark the spot where man first flew with wings.

Sponsors of the memorial claim that John Joseph Montgomery made the first flight back in '83 from a hillside in the Otay Valley overlooking the Pacific.

That summer, 61 years ago, was a scorcher and the Montgomery boys on their parents' ranch had time on their hands. John, 26, wanted to fly. He had watched birds soaring through his father's orchards and thought he had discovered their secret of flight. His ideas went into a glider made of ash wood, piano wire and unbleached muslin smeared with linseed oil.

James, then 19 (he is 80 today and an Oakland attorney), could not seem to muster up much enthusiasm for the venture. This may have been due to the role his brother had cast him in—that of motive power for the glider.

Hauled to the crest of a hill, James started running down it that hot summer day, towing the glider behind him. Suddenly, it soared free of the earth and traveled 600 feet before bouncing to a stop. But let James tell the story:

"To him," said James of his late brother, "the flight's success meant the opening of vast and wonderful scientific vistas. To me, the uninspired layman, it was rather laborious running to satisfy the whim of an older though admired brother."

"The moment my brother landed after that first trial he knew he had learned the secret of flight. John repeated his flight many times that day, but was satisfied after the first hop that new worlds had been opened."

Two foresighted sisters of John Montgomery, Jane and Mary, have accumulated magazine articles, newspaper clippings and other material which, in the hands of the committee, clinch Montgomery's claim over Lilienthal.

—HAROLD J. ASHE

Capital Scenes... and What's Behind Them



War was never like this

A MAN in the war-food setup—not Marvin Jones, though it might well have been: he has his candid moments—said the food and feeding tangle led him to paraphrase an old couplet. This is the way he'd say it:

"Oh, what a tangled web we weave,
When first we struggle to relieve."

He said that if he were Mr. Jones and Mr. Bowles and Mr. Lehman and Mr. Byrnes he would hang up a sign on the office door:

"Out for the post-duration."

As he sees it the food problem is not only not soluble but most improbable.

But every one means well

WE HAVE about one-quarter more food warehoused and in armed service holdings than we can possibly eat this food year, he said. None of us has lost weight through sacrifice, as we dolefully predicted when the war began. Some of us have worked off some fat. None of us has suffered, except the few grocers whose irritated customers egged them. The way the farmers are flying at it, next year's food production will be larger than this year's. Some of their sons will be back to spell the old men on the tractors.

"So you'd think we'd tell 'em to lay off raising so much food."

Remember the OPA witness who told a congressional committee about the millions of dozens of eggs the Government has in storage and about the passionate hens who were laying more eggs in a patriotic fury. He said he did not know what the Government would do with its eggs. He wished he did.

But we can't do that

WE DO not know what is ahead. We do not know how much food Europe will ask when victory comes.

So we must go right on stockpiling.

When we are sure that we will not need the food we have we could dump the surplus on the market. That would smash the farmers again and there might be some more pitchfork marches. It would be a cruel and idiotic thing to do. Remember that in 1919 we gave the French Government our food surplus

rather than freight it home and the French Government promptly threw it on the market and mortgages clicked shut all over the West. Maybe the French Government had not sufficiently considered the consequences of its act. Maybe it saw a chance to make some money.

We will not do that again. The war-food man thinks that for reasons of November politics—and because every one feels the farmer should get a fair deal this time—Congress will wangle some way of supporting farm prices for an indefinite period. Maybe forever.

The stockpile gets bigger

WE COULD, he admitted, send our domestic surplus and what remains after the G.I.'s have soldered the lid on the Nazis, to the starving peoples in the small conquered countries.

"That's what the UNRRA is for. Heaven knows the people need the food. Britain is fairly well off, with 5,500,000 tons of food, and Russia has an immense stockpile of such dried foods as peas, beans, milk and butter and cheese. There is no doubt whatever that those who have been half-starved would eat every ton on hand and every ton we could get to Europe. Roughly speaking, one ton of dried food will feed one person one year, plus what he can pick up at home."

The trouble, said the war-food man, is that the people would be grateful to us.

Food gets into politics

THE men who will be in the governments of the small freed states want the handling of the American foods put in their hands for distribution:

"You can't blame 'em," he said. "It is probable that in every state—including Germany and France—there will be revolutions or insurrections or little pop-up feuds unless the Allies institute a stern military occupation. The AMG has done a good preliminary job, but it must have armed backing or it will be overrun by the local politicians when peace comes. The Allies might not want to accept for local government the pre-war officeholders, no matter how competent they may be, because they would probably be either active enemies or budding revolutionists. It may be neces-

sary to call for a new deck everywhere. And then X-ray it."

Whatever government may have control would be immensely strengthened if it had authority to distribute American food.

But if the Americans gave the food direct to the people, our political motives would be questioned. Europeans come from Missouri, too.

Hard roads for the UNRRA

UNRRA has in actual or promised cash \$2,000,000,000. It has the cash or promissory backing of the 45 Allied nations. Every one in the civilized part of the world approves its purposes.



Unless food and other help reaches the distressed peoples soon almost any unpleasant thing may happen. Yet an atmosphere of doubt and uncertainty has been growing about UNRRA, he said. Suppose, he asked, some of the 5,500,000 tons of food now in Great Britain were to be sent—stencilled as shipped from Britain—to Latvia or Estonia or some other country Russia wishes to befriend. Or what would Britain think if Russia landed plenty of food in France, the balance of power being considered, when, as and if, and considering the fact that Russia is on far better terms with France than either Britain or the United States. UNRRA's American Director General and largely an American staff is learning fast.

The middle of the web

HE QUOTES with much personal satisfaction one of the comments made by emphatically-ex Ambassador Bullitt on Harry Hopkins' diplomatic mission to Moscow.

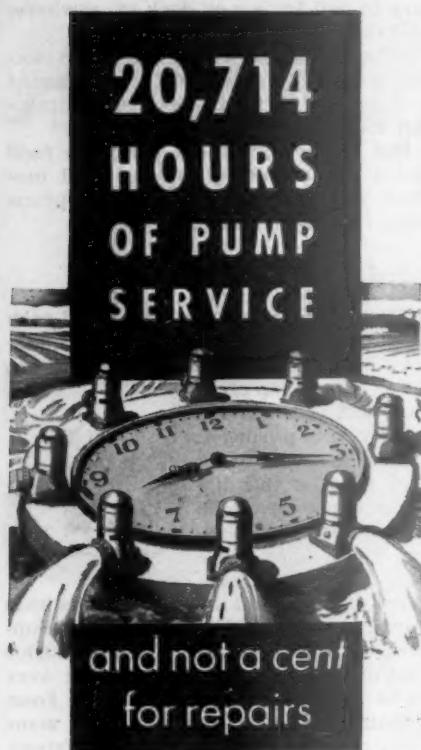
"Hopkins," Bullitt is supposed to have said, "gave Stalin everything and didn't even get a promise in return."

Mr. Bullitt thinks that a promise to be broken later would have been better than no promise at all. But the man from war-food, who has never wept when acid was dropped on Hopkins, thinks our situation would not have been affected either way. We must get the food to the starving either by direct distribution or through governmental or local organizations. Either way we're in so far that the only thing we can do is to go farther.

"But, dammit," he says, "those folks are hungry."

Bear this in mind

IMMEDIATELY after the German armies went kaput in 1918 a group of American correspondents got into Germany with the tacit approval of American Army authorities. The British and the French wanted to send their correspondents in first. Can't blame them. The first story printed is the one that is remembered. In Frankfort they were ex-



Here is a typical Peerless performance record: A Peerless Deep Well Pump was installed January 29, 1939, in one of the "toughest" pumping locations in America. It was pulled June 2, 1944, to permit installation of another Peerless Pump of greater capacity. For almost 5½ years it was operated at an average of 10 hours daily, with a total of 20,714 hours of meritorious service. Never was a single cent spent on repairs. After pulling the pump, inspection revealed no appreciable wear. It has been installed in a near-by well and is expected to give years of additional service with little or no repair cost. This is the kind of service for which Peerless is noted—low cost of upkeep and unfailing dependability. Make Peerless your choice if economy is your objective.

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cently wined and dined by some of the leading citizens:

"The Allies won't let Germany have an army or navy," said the reporters.

"Gott sei dank," was the hearty reply of the town fathers. "If we do not have to give our time and our money to support the military we will become the greatest industrial nation in the world. We hope you are right."

Peacemakers might remember that.

There is another angle

RUSSIA has a score to settle and wants to see the Germans at work rebuilding her cities and farms. The French

position and that of de Gaulle is getting stronger daily. Cool-headed diplomats think France will be the fourth of the Great Powers about as soon as the war ends. China will be

admired, but China has not the solid strength that France will have. France will have jobs for the Germans to do. But all the nations, ourselves included, will want to get back to business as soon as possible, and make profits so taxes can be paid. A door will be opened to Germany—

But some bills for loot and murder must first be settled. The Herman Goering cartel will be the first to be returned, as nearly as possible, to its original owners, and the other piracies will follow. It is estimated that the military occupation will last for a year after unconditional surrender. The business of untangling the incredibly complicated thefts of real and industrial properties—including those owned in Britain and America as well as by the citizens of the conquered lands—may run for half a generation. And the untanglers must have force to call on.

Look backward, Herr Goering

CONTINUING to speak of the recovery of property stolen by the Germans and, of course, the Japanese—

In 1939, when Germany attacked Poland, Americans were still trying to get their claims settled for property injury during the First War. The Germans treated the mixed claims commission with contempt after they got their own back. At the last they did not even appoint a German member.

And from now on

THIS promises to be the winter of our discontent with our Allies. And they will be just as discontented with us.

"Which," said a Senator, "is precisely as it should be."

The Allies held together in war for obvious reasons. Now that peace is in sight each is free to look to its own national affairs. There is the case of the Qatar oil concession which the Cal-Tex oil combine did not get because the British caught its negotiator in the Persian

Gulf and locked him in the hoosegow. And the winning of a city in Normandy which was credited to a British force although the Americans did it. And the British insistence that news of American fighting in France, written by American correspondents, should be relayed through London.

"These and similar causes of friction can be ironed out now," said the Senator. "We can afford to lose our tempers a little bit—on both sides—and yet do no injury. And now's the time to do it. When we are sitting side by side on the Jap-German shoulder blades it might not be so easy."

Pre-view of Cap. Krug

SPECTATORS of "Cap." Krug's career better call them that; they're not friends so much as they are onlookers; say the big chap will make the War Production Board work like a watch:

"He's a natural boss," they say.

Their theory is that he furthered this congenital bossiness by years spent in bureaucracy. Business men, they say, give a little here and gain a little there. They know it is not good business to make a bargain at the cost of an enmity. A complete bureaucrat doesn't care.

If this seems to indicate that Krug is a tough guy with iron hands it has missed the mark. Every one likes him, so to say. He is mild and diffident as a person. As a boss he has innards of chrome steel.

A wreath for Michael

HE is about 50 years old. He is squarely built, good natured under stress, smiling, accessible, helpful, and immovable. He is as blandly courteous to a junior clerk as to an ambassador. So far as is known neither could frighten him. He meets reporters, he tells them what he is authorized to tell them and no more, and they hate him and the next day they try unsuccessfully to coax secrets out of him and call him Mike. He is an Irish-Yankee, Massachusetts-born, his two Christian names are Michael James and his two children are Michael James and Patricia Frances. He began as a field clerk in the First War and is now the chief of the Division of Current Information of the State Department, and although it is undeniable that the attempt of the conferees at Dumbarton Oaks to high-nose the reporters was ludicrously unsuccessful Mac kept out of the brawl. The reporters would cheerfully drink a toast to Mike MacDermott—who did not help them at all.

Herbert Cory